ENTREPRENEURSHIP IN THE INFORMAL ECONOMY: EVIDENCE FROM INFORMAL INSTITUTIONAL ENVIRONMENTS

BY

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DISSERTATION

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ABSTRACT

The informal economy remains understudied and a misunderstood phenomenon. This dissertation examines entrepreneurship in the informal economy by drawing upon a variety of theories in management research to examine antecedents that may explain and predict the entrepreneur's likelihood of transitioning out of the informal economy. Using data from a unique government survey of an urban slum in Rio de Janeiro, Brazil, empirical findings suggest that examining micro- and firm-level differences between entrepreneurs may inform the field's traditional macro-level theorizing on the informal economy. Implications for policymakers and management research along with potential avenues for future research are discussed.

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CHAPTER 1: Introduction

The informal economy is defined as economic activity that takes place outside of government regulation and oversight and represents a significant portion of the world economy (Godfrey, 2015; Webb, Tihanyi, Ireland, & Sirmon, 2009). Current estimates suggest that the informal economy produces as much as 60 to 70 % of GDP in many less developed economies and between 10 to 20% in developed economies (Schneider 2002, 2005). The significant imbalance of informal economy activity in less developed economies relative to developed economies is due to higher levels of institutional voids, “situations where institutional arrangements that support markets are absent, weak, or fail to accomplish the role expected of them” (Mair & Marti, 2009: 419). However, within countries there exists significant variance in the level of institutional voids and where informal economic activity takes place. For example, many locations in the developing world are plagued by extreme poverty where institutional voids are even more pronounced (Bruton, 2010; Hulme & Shepherd, 2003; Pearce, 2005; Prahalad, 2005; Prahalad & Hart, 2002; Seelos & Mair, 2007, United Nations, 2010). Consequently, the informal economy is even more prevalent in impoverished settings (Bruton, 2010; De Soto, 1989, 2000).

Research on the informal economy has long explored the rise of the informal economy (Castells & Portes, 1989; De Soto, 1989, 2000; Godfrey, 2011, 2015; International Labour Office, 2002; Lewis 1954/1958; Polanyi, 1957; Wallerstein, 1974/2007) and has generally focused on the quality of formal institutions (e.g., governments) and regulations to predict informal activity. For example, high registration fees, high legal bureaucracy, and the absence of property rights protection have been shown to increase informal economic activity (Besley & Burgess, 2004; De Soto, 2000; La Porta & Schleifer, 2008; Marcouiller & Young, 1995;

Nwabuzor, 2005; Thomas & Mueller, 2000; Zinnes, 2009). Research in the economics literature has examined the relationship between economic factors such as capital and labor and the overall structure of the economy to explain the informal economy, levels of economic development, and impoverished settings (Maloney, 1999; Wallerstein, 2007). Other research in sociology has considered the social structure of communities such as ethnic enclaves and immigrant communities to explain informal activity (Ahmad, 2008; Geertz; 1963; Nyssens, 2006; Peredo & Chrisman, 2006; Portes & Sensenbrenner, 1993; Venkatesh, 2006).

A common theme throughout much of the extant literature on the informal economy is a focus on how elements at the macro- and meta-level of analysis (e.g., community, industry, country levels) are instrumental in predicating informal activity. Yet, despite this impressive body of work, there is little research that explores how the strategic behavior and attributes of entrepreneurs at a more micro-level prompt and support informal activity and more importantly how they influence the entrepreneur's exit out of the informal economy and into the formal economy (Skousen & Mahoney, 2015). Exiting the informal economy has important implications for poverty reduction as the formal economy can provide better access to institutions that facilitate the accumulation of resources and growth. Thus, scholars and public policymakers often suggest that the solution to the informal economy and poverty resides in improving the quality of institutions. However, Godfrey (2011) notes that "the easily invoked (but fundamentally incorrect) notion of weak institutions provides an overly simplistic solution to a complex problem. In reality, the *(informal)* institutions (i.e., values and norms) supporting and sustaining poverty *and the informal economy* prove remarkably robust, strong, and able to resist change and reform" (Godfrey, 2011: 266; Mair, Marti, & Ventresca, 2012). This reality points toward the need for more management research that examines the interaction between formal and informal institutions on entrepreneurship (Godfrey & Dyer, 2015; Peredo & McLean, 2013; Sine & David, 2010) in the context of the informal economy (Bruton, 2010; Bruton, Ketchen, & Ireland, 2013; Hart, 1973; Peng & Heath, 1996; Webb, Bruton, Tihanyi, & Ireland, 2013; Webb & Ireland, 2015).

Management scholars have recently begun to recognize that the informal economy is an important and understudied phenomenon and that management scholars are well positioned to contribute to this body of research (Bruton, 2010; Bruton, Ireland, & Ketchen, 2012; Godfrey, 2011, 2015; London & Hart, 2011; McGahan, 2012; Prahalad, 2005; Webb *et al*., 2009a, Webb *et al*., 2013). Yet, despite increasing interest and calls for management scholars to study the informal economy, little is known about how individual and firm-level characteristics may prompt entrepreneurs to exit the informal economy. This dissertation seeks to examine these questions by drawing upon research on institutions and entrepreneurship (e.g., the interaction of formal and informal institutions) and a variety of other streams of literature, including entrepreneurship research on motivation, human capital, logic from transaction cost economics, institutional theory, and family business research.

As noted above, the informal economy tends to be most prevalent in institutional environments characterized by high levels of institutional voids. Institutions establish "the rules of the game" and thereby define what is acceptable within a society (North, 1990: 3). Institutions can be broadly classified into formal and informal institutions (North, 1990). Formal institutions are regulations and laws that are codified and enforced, often by the state, and establish the boundaries of what is legal (Suchman, Steward, & Westfall, 2001). More recently, formal institutions have been conceptualized broadly to include supporting apparatuses such as capital/labor markets, education, health care, utilities, and infrastructure (Khanna & Palepu, 1997; Mair & Marti, 2009). In contrast, informal institutions are beliefs, values and norms that establish what are socially accepted and expected patterns of behavior (Aldrich & Baker, 2001; Suchman *et al*., 2001).

The combination of formal and informal institutions within a well-defined space (e.g., country, region, city, community, group, etc.) creates an institutional environment that leads to an institutional logic where there is shared meaning that provides coherence to social life and expectations about social behavior (Misangyi, Weaver, & Elms, 2008; Scott, 2008; Thornton & Ocasio, 1999; Thornton, Ocasio, & Lounsbury, 2012). Institutional environments vary in their support for entrepreneurial activity and specific types of entrepreneurship (Terjesen, Hessels, & Li, 2013) as formal and informal institutions may converge or diverge in their support (or lack of support) for different types of entrepreneurship (Eberhart, Eesley, Cheng, & Skousen, 2015). One notable outcome of when formal and informal institutions diverge is the informal economy (Webb, *et al*., 2009a).

The informal economy represents a situation where informal institutions are largely supportive of entrepreneurial activity but formal institutions either consider such activity illegal and/or do not provide adequate support or access to resources that facilitate growth due to weak or insecure institutions (low quality) or incomplete or absent institutions (institutional voids) (Godfrey, 2011). As a consequence, entrepreneurship in areas that are high in institutional voids often occurs in institutional environments that can be classified as *informal institutional environments*. Informal institutional environments are defined as institutional environments (the combination of formal and informal institutions within a well-defined space) where economic activity is largely governed by informal institutions that are supportive of the informal economy and consider informal economic activity as an acceptable or legitimate form of economic activity and where formal institutions are relatively absent (i.e., high institutional voids). On the other hand formal institutional environments are institutional environments where economic activity is largely governed by informal institutions that are not supportive of the informal economy and consider informal economic activity as an unacceptable or illegitimate form of economic activity and where formal institutions are influential and well-functioning.

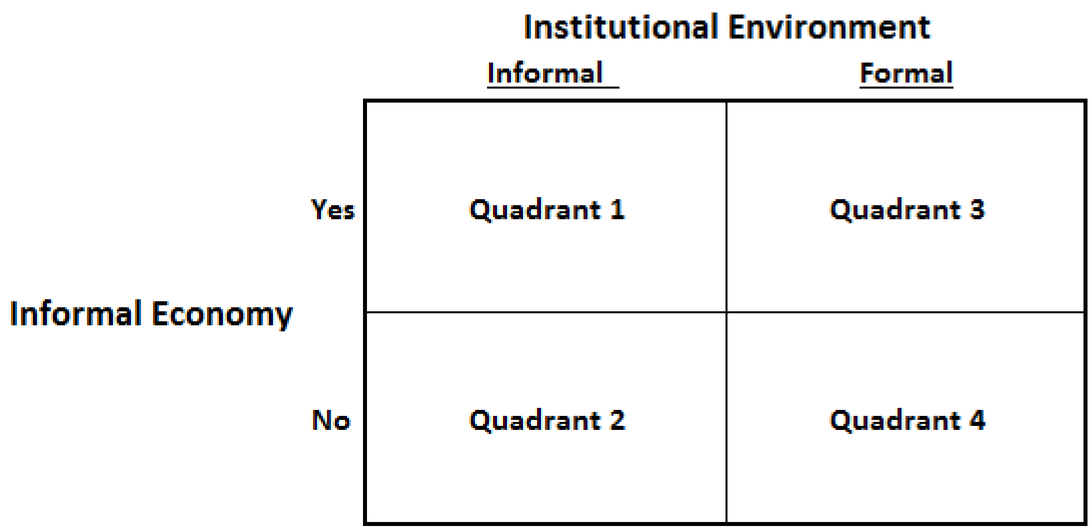
Figure 1.1 provides a taxonomy of economic activity based on whether the activity occurs in formal or informal institutional environments and on whether or not such activity is considered part of the informal economy. Accordingly economic activity can be categorized into four-distinct outcomes or quadrants. Quadrant 1 depicts economic activity that is part of the informal economy and occurs in an informal institutional environment. Quadrant 2 depicts economic activity that is part of the formal economy but takes place in an informal institutional environment that is supportive of the informal economy. Quadrants 3 depicts economic activity that is part of the informal economy but takes place where informal institutions do not support the informal economy and formal institutions are influential and well-functioning. Lastly, quadrant 4 depicts economic activity that is part of the formal economy and takes place where informal institutions do not support the informal economy and formal institutions are influential and well-functioning.

In the remaining dissertation chapters I seek to examine how the attributes and strategic behavior of entrepreneurs operating in informal institutional environments may influence the entrepreneur's likelihood of exiting the informal economy. Chapter 2 aims to provide a greater understanding of entrepreneurship in informal institutional environments (Quadrants 1 and 2) by examining how entrepreneurship in this context may differ from entrepreneurship in more formal institutional contexts Chapter 3 examines factors that help to explain and predict which entrepreneurs are likely to cross institutional boundaries. Crossing institutional boundaries leads to institutional pluralism and conflicting pressures from formal and informal institutions and may be an important antecedent to exiting the informal economy. Specifically, Chapter 3 considers entrepreneurs that are operating in an informal institutional environment (quadrants 1 and 2) and whether or not they cross into a formal institutional environment (quadrants 3 and 4). Chapter 4 examines factors that help to explain and predict which entrepreneurs are likely to exit the informal economy through registration. Specifically, this chapter examines the differences between entrepreneurs in quadrants 1 and 2. Figures 1.2 and 1.3 summarize the main research questions and each provides a figure to illustrate the phenomenon under examination. Lastly, Chapter 5 provides a discussion and conclusion on the findings and contributions and offers potential avenues for future research.

The data used in this dissertation derive from a community survey of entrepreneurs in an informal institutional environment, an urban slum, called Manguinhos in Rio de Janeiro, Brazil. I also use survey data on a second urban slum called Rocinha for robustness checks. Figure 1.4 provides a map of Rio de Janeiro. Areas marked in red represent urban slums. Evident from this map is that urban slums are prevalent across the city. The survey was performed by a third party administrator on behalf of the state government of Rio de Janeiro to assist in identifying and evaluating the entire population of entrepreneurs in the community. The survey was administered door by door by trained employees during the period July 2008 to April 2009. A total of 2,833 entrepreneurs were identified. Of this total, 57 refused to participate in the survey and 61 were unable to be contacted. For those entrepreneurs that were unable to be contacted, survey administrators made an attempt to visit them on three different occasions on different days and times in an effort to have them participate in the survey. The total number of entrepreneurs that completed the survey was 2,715 representing 95.8% of the total population of entrepreneurs identified. The responses were analyzed and subsequently verified in the field on approximately 20% of the respondents to ensure validity. For purposes of this study, businesses that were associated with the government or operated as a not-for-profit (a total of 98 businesses) were excluded resulting in an available sample size of 2,617.

FIGURES FOR CHAPTER 1

Figure 1.1 Taxonomy of Economic Activity



Outline of Dissertation Chapters Related to Figure 1.1:

Chapter 2: Examines entrepreneurship in quadrants 1 and 2

Chapter 3: Examines which entrepreneurs in quadrants 1 and 2 are more likely to cross into formal institutional environments represented by quadrants 3 and 4.

Chapter 4: Examines the differences between entrepreneurs in quadrants 1 and 2

Chapter 5: Provides a discussion of results and avenues for future research. It also seeks to explain how the empirical findings may inform entrepreneurship in quadrant 3.

Figure 1.2: Research Question #1

Research Question #1: What factors help to explain and predict which entrepreneurs who are operating in informal institutional environments are likely to cross institutional boundaries into a formal institutional environment?

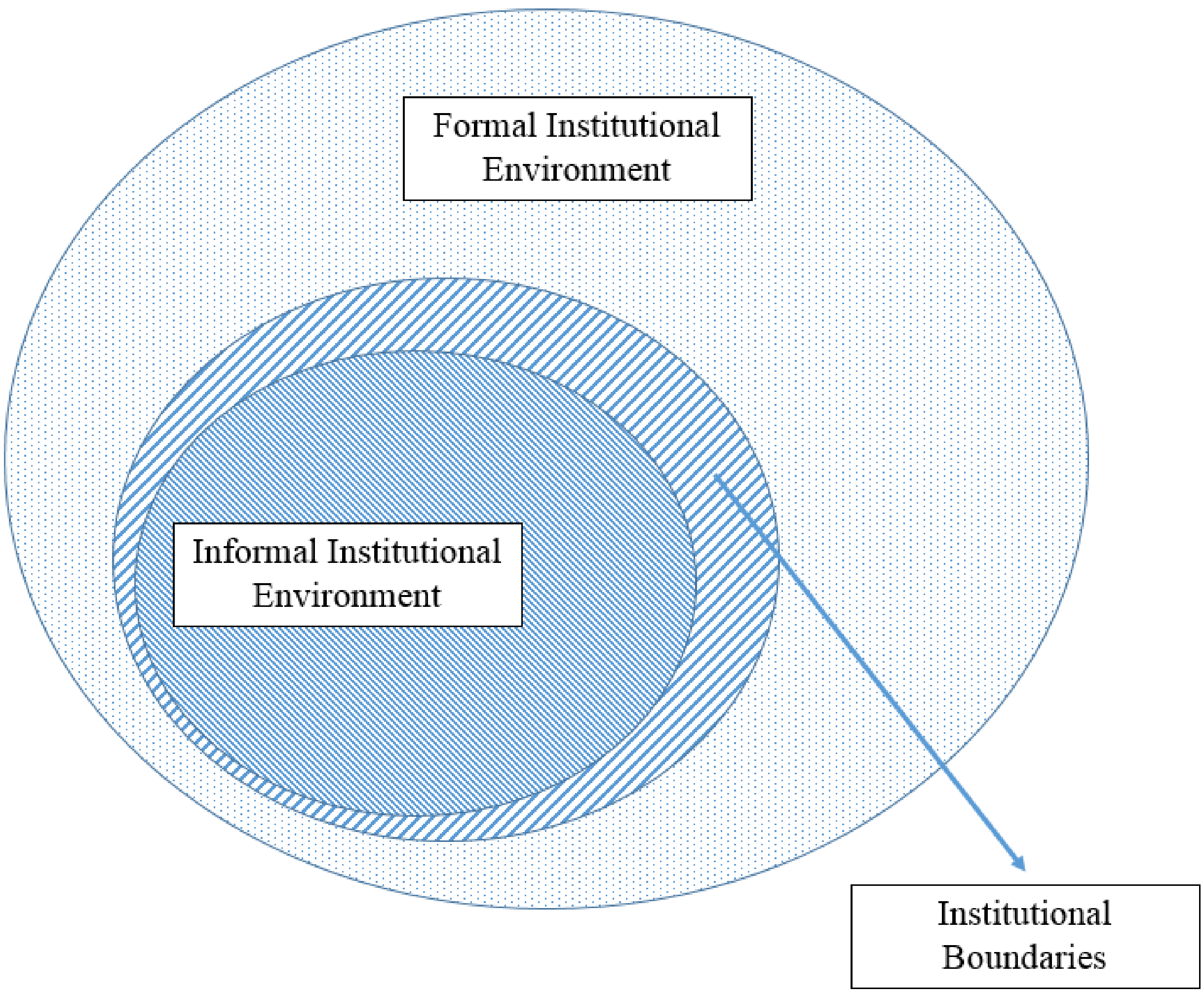


Figure 1.3: Research Question #2

Research Question #2: What factors help to explain and predict which entrepreneurs who are operating in informal institutional environments are likely to exit the informal economy through registration?

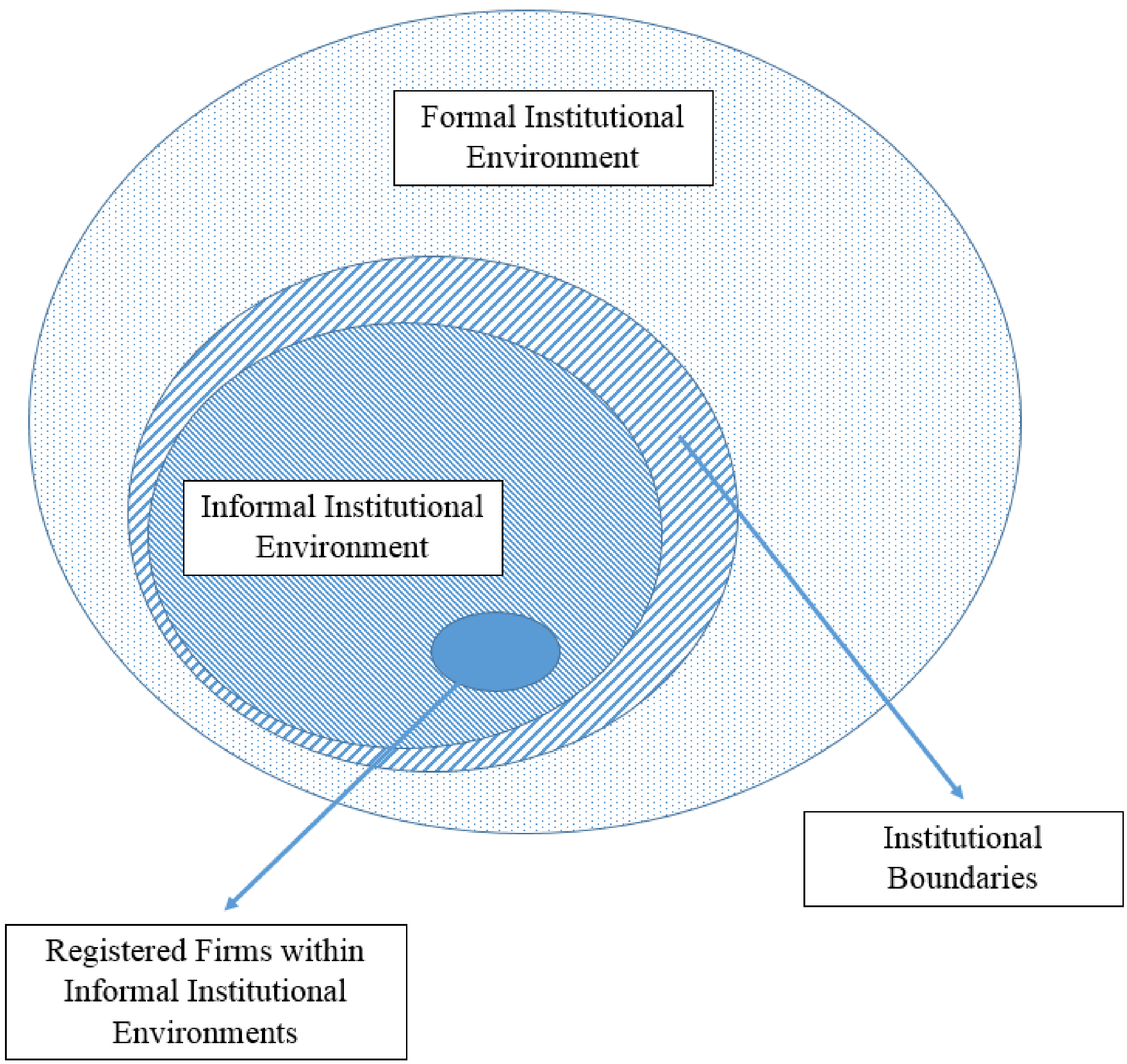
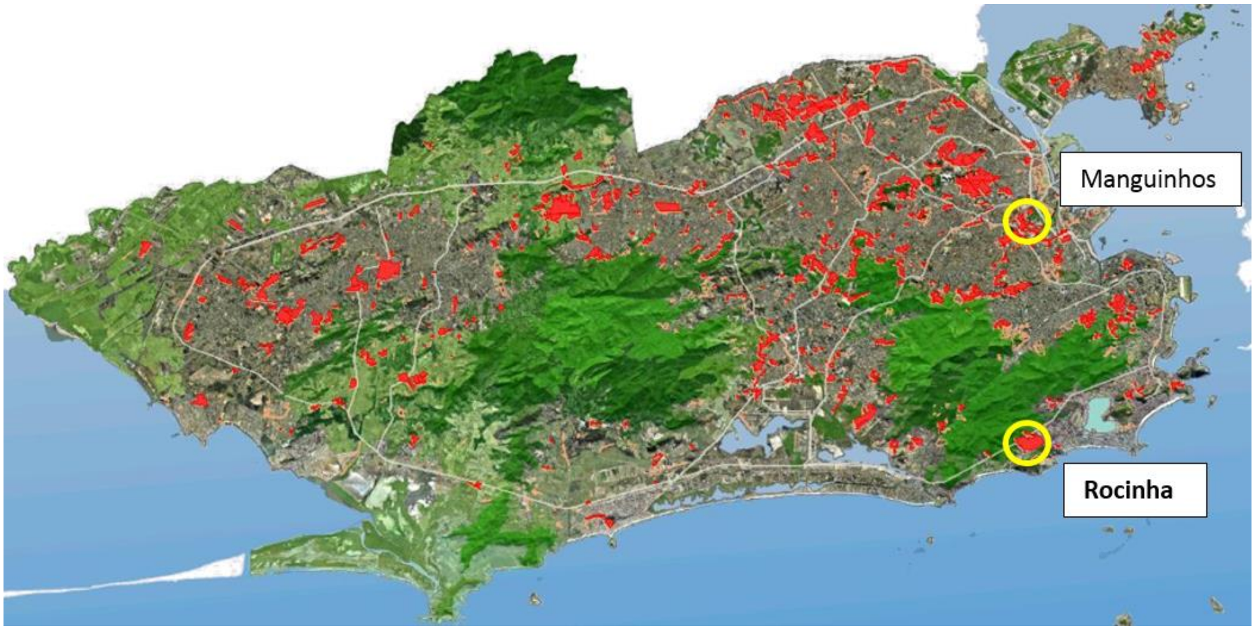


Figure 1.4: Map of Rio de Janeiro



Source: Secretaria Municipal de Habitação (Municipal Department of Housing)

Note 1: Areas marked in red are urban slums.

Note 2: Data used in this dissertation are from Manguinhos and Rocinha

CHAPTER 2:

Understanding Entrepreneurship in Informal Institutional Environments

Participation in Entrepreneurship

Identifying who participates in entrepreneurship is a first critical step in understanding entrepreneurial activity in informal institutional environments. As noted in figure 1.4, informal institutional environments are prevalent phenomenon. Based on the survey data it is estimated that there are 27,073 residents in Manguinhos where 47.3% are male and 52.7% are female. Extant research on gender and entrepreneurship suggests that females tend to lag behind male entrepreneurs in starting, owning, and operating businesses based on data in more formal institutional environments (Bruin, Brush, & Welter, 2006; Minniti, Arenius, & Langowitz, 2005; Reynolds & Curtin, 2008). Interestingly, in Manguinhos, females comprise the majority (55%) of the total sample (1,444) / 2,617) of individuals who choose to become entrepreneurs. When considering the total population in the community, entrepreneurship rates by gender tend to be similar (Males = 9% and Females = 10%). This increase in female entrepreneurship in informal institutional environments relative to formal institutional environments may be influenced by general findings which suggest that female entrepreneurs in the informal economy tend to operate at lower levels of organization and scale, and do not have a formal space to operate compared to male entrepreneurs (Fernandez-Kelly & Garcia, 1991; Webb *et al*., 2013; Williams & Gurtoo, 2011). These general findings suggest that entrepreneurial entry for females may be higher in informal institutional settings compared to more formal institutional settings. These general findings appear to be consistent with those in Manguinhos as only 25% of female entrepreneurs operate in a storefront property compared to 50% of male entrepreneurs. This difference is statistically significant ($p < .001$) and suggests that female entrepreneurs have a greater propensity to be street vendors and base their business operations out of their own homes. Table 2.1 provides t-statistics on gender differences.

The distribution of entrepreneurs by gender and age is presented in Figure 2.1. The average age of entrepreneurs is 41 years old whereas the average age of an individual in Manguinhos is 27 years and roughly 75% of the population is under the age of 40. Males and females of all age groups participate in entrepreneurship. The number of entrepreneurs for both males and females tends to follow a bell curve skewed to the right that peaks between the age of 35 and 44. Figure 2.2 presents the distribution by percentage of entrepreneurs of the same gender. This graph indicates that female entrepreneurs tend to have a greater propensity to become entrepreneurs at an earlier age. In the earliest age groups (17 – 24 and 25 – 34) females exhibit a greater percentage of entrepreneurs of the same gender. This trend shifts in subsequent age groups. Gender differences by age are statistically significant up to age 55 (see Table 2.1) suggesting that males and females have different propensities to engage in entrepreneurship at different ages. To further examine gender differences, Figure 2.3 provides the percentage of gender composition by age group. Similarly, a clear pattern emerges as entrepreneurs in the two youngest age groups of 17 – 24 and 25 – 34 are disproportionally composed of females, 67% and 59% respectively. The composition of gender by age groups 35 – 44 and 45 – 54 is roughly 50% for each gender and begins to rise again for female entrepreneurs over 55 years of age.

Educational, Employment, Industry and Start-up Experience

Human capital refers to "the skills and knowledge that individuals acquire through investment in schooling, on-the-job training, and other types of experience" (Unger, Rauch, Frese, & Rosenbusch, 2011: 343) and has been shown to highly influence the entrepreneurship process (Shane, 2000). Human capital theory (e.g., Becker, 1962, 1964; Schultz, 1961) posits that entrepreneurs who have a greater stock of knowledge will have greater cognitive ability, which will lead to more productive and efficient activity (Block & Sandner, 2009). The entrepreneur's level of human capital is particularly important in informal institutional environments as higher levels of human capital can help the entrepreneur navigate high levels of institutional voids. Higher levels of human capital can also lead to better sense making of institutional ambiguity between legal rules and enforcement capabilities by government agencies (Skousen & Mahoney, 2015). Furthermore, human capital has been shown to be a salient predictor of an entrepreneur's willingness to engage with surroundings, to search for new products or vendors, and transact with unfamiliar exchange partners (Kintgen, Kroll, & Rose, 1988; London, Esper, Grogan-Kaylor, & Kistruck, 2014; Rosa & Viswanathan, 2007).

In this section the entrepreneur's level of human capital is examined across the following four dimensions that have been established measures of human capital (Cooper, Gimeno, & Woo, 1994; Delmar & Shane, 2006; Evans & Leighton, 1989; Gimeno, Folta, Cooper, & Woo, 1997; Shane, 2000):

- Educational Attainment
- Employment Experience
- Industry Experience
- Start-up Experience

Educational Attainment

Figure 2.4 provides the educational attainment of entrepreneurs by gender. Research on gender commonly posits that female entrepreneurs tend to have less institutional support (whether actual or perceived) from both formal and informal institutions for entrepreneurial activity (Acs, Bardasi, Estrin, & Svejnar, 2011; Baughn, Chua, & Neupert, 2006; Jennings &

Brush, 2013). Access to education is one important form of institutional support. Interestingly, variation in the entrepreneur's educational attainment does not appear to vary by gender as the t-statistic is insignificant (See Table 2.1). While statistical differences in educational attainment by gender do not manifest, the vast majority of entrepreneurs do not complete the equivalent of a high school education (85%) and 64% do not complete a primary-level school. Only 3% of entrepreneurs pursue further education past the equivalent of high school. These trends tend to be consistent with non-entrepreneurs in the community as the average individual did not complete primary school. Only 11% of residents have completed the equivalent of high school and 3% pursued education past high school.

Figure 2.5 provides educational attainment by age. While educational attainment remains low for both males and female entrepreneurs, figure 2.5 illustrates a strong pattern of improvement in younger age groups. For example, an incomplete primary education was as high as 86% for entrepreneurs between 65 – 74 and dropped to 47% for entrepreneurs between 17 – 24. Unfortunately, education beyond primary education appears to be achieving less improvement as younger age groups are not pursing higher levels of education (i.e., high school and beyond) which may have a bigger impact on the quality and type of entrepreneurship.

Employment and Industry Experience

Prior work experience has been shown to be associated with how an individual identifies an entrepreneurial opportunity and how he/she subsequently exploits that entrepreneurial opportunity (Shane, 2000). Figure 2.6 illustrates what the entrepreneur did before starting the business. Based on the information in figure 2.6 industry experience can be classified as entrepreneurs that were "employed in same area," "had a business in same area," or "always worked in this manner" and are provided in figure 2.7. Based on this categorization, only 23% of the sample had some form of industry experience and males tend to have more industry experience (28%) relative to females (18%) ($p<.001$). Interestingly, the majority of entrepreneurs (56%) were employed in an area unrelated to the business they started and 14% were employed within the same area. This phenomenon is in stark contrast to recent findings of representative samples in the USA that suggest that roughly 75% of entrepreneurs engaged in start-ups have previous industry experience (Reynolds & Curtin, 2008). Research on industry experience in more formal institutional environments suggests that entrepreneurs with industry experience have greater survival rates (e.g., Delmar & Shane, 2006). Figure 2.8 illustrates that males are more likely to enter entrepreneurship from employment from either the same or different areas compared to females ($p < .001$) (See Table 2.1). Similar to industry experience, males tend to have a greater tendency to enter entrepreneurship from previous employment as 82% of males had employment experience compared to 61% for females ($p < .001$) (Figure 3.5). It is important to note here that the entrepreneur may have been unemployed at the time of entrepreneurial entry (as noted in section 4.0 on motivation) but this variable captures what the entrepreneur did before becoming an entrepreneur.

Start-up Experience

Previous experience as an entrepreneur is provided in figure 2.9. About 90% of entrepreneurs in Manguinhos had no previous experience starting or managing a business with a statistically significant difference between males and females ($p< .05$). Only 8% of female entrepreneurs and 11% of male entrepreneurs had previous start-up experience. The proportion of entrepreneurs without prior start-up experience is substantially higher than in formal institutional environments where roughly 60% of entrepreneurs had no start-up experience, as captured by representative samples in the USA (Reynolds & Curtin, 2008).

Motivation

Research on an entrepreneur's start-up motivation distinguishes between necessity and opportunity-driven entrepreneurship, also referred to as push and pull factors for starting a business (Kirkwood, 2009; Schjoedt & Shaver, 2007). Research has shown that motivations for starting a business tend to influence how entrepreneurs navigate the entrepreneurship process (Shane, Locke, & Collins, 2003). Necessity-based entrepreneurship refers to the conflict between one's current and one's desired occupational status that may push an individual into starting a business when other alternatives to achieve an individual's desired outcomes are unavailable. Opportunity-based entrepreneurship refers to the entrepreneur's expectation of potential rewards and being better off by starting a business compared to being employed by someone else.

Figure 2.10 provides the entrepreneur's motivation for starting a business by gender. For both males (58%) and females (63%) the primary motivation for starting their business was because they were unemployed. Important gender differences are evident in the other motivation categories. Males tend to be more driven by autonomy and opportunity and less to increase family income relative to women. Consistent with prior literature the categorizations in figure 2.10 can be classified into necessity and opportunity-driven entrepreneurship. Necessity-based entrepreneurship included "unemployed" and "other" reasons that were consistent with push factors. Opportunity-driven entrepreneurship included "autonomy," 'opportunity emerged" and to "increase family income". Following this categorization, males and females exhibit statistically different motivations ($p < .01$) where 40% of males were driven by opportunity-driven entrepreneurship compared to 34% for women as shown in figure 2.11. In chapters 3 and 4 opportunity-driven entrepreneurship is further broken down to consider an important sub-category of opportunity-driven entrepreneurship referred to as improvement-driven entrepreneurship.

Family Business

Family business is a common form of ownership in informal institutional environments as 35% of the businesses were identified as a family business. In the context of the informal economy it is not possible to define a family business on legal ownership agreements as is generally done in family business research in the formal economy (Khavul, Bruton, & Wood, 2009). In this study a family business is defined as a business that is owned solely by family members or in the case where there is only one owner the owner employs family members and considers the firm to be a family business.

Figure 2.12 provides the percentage of family businesses by gender. Surprisingly, males have a slightly higher tendency (39%) to operate as family businesses compared to females (32%) and the difference is statistically different ($p < .001$) (See Table 2.2). The remainder of this section examines whether entrepreneurs who operate as a family business vary in their human capital and motivations. Figure 2.13 illustrates that family and non-family businesses are not statistically different from each other in educational attainment. Figures 2.14 and 2.15 illustrate that family businesses tend to have more industry experience ($p < .05$) and less employment experience ($p < .10$). Figure 2.16 and 2.17 indicate that family businesses do not vary in their previous start-up experience and motivation for starting a business as no statistical differences were identified.

The Informal Economy

Only a small percentage of entrepreneurs in Manguinhos, represented by quadrant 2 in figure 1.1 are considered part of the formal economy based on their registration status with the government. Registering with the government has important implications for transitioning out of poverty as formality may provide an entrepreneur with access to resources and other resources that facilitate growth. Figure 2.18 provides the formality of the entrepreneur by gender where *formal* means the entrepreneur is registered with the government and *informal* means the entrepreneur is not registered with the government. Males comprise roughly 2/3rds of (67%) of the entrepreneurs that are legally registered. In figure 2.19 educational attainment by formality is provided. Entrepreneurs that are registered are statistically different in their educational attainment ($p < .001$) from those that are unregistered (See Table 2.3). Figure 2.19 indicates that roughly 50% of formal entrepreneurs completed high school compared to only 14% of informal entrepreneurs.

In figure 2.20 industry experience is statistically associated with formality ($p < .001$) as roughly half (45%) of formal entrepreneurs had industry experience whereas only 22% of informal entrepreneurs had industry experience. In figure 2.21 no statistical difference in employment experience was found between formal and informal entrepreneurs. Figure 2.22 indicates that the majority of formal entrepreneurs are not serial entrepreneurs but they do exhibit a higher portion (20%) of formal entrepreneurs relative to informal firms (9%) and is statistically significant ($p < .001$). Figure 2.23 provides the relationship between motivation for starting their business and formality. Entrepreneurs who operate formally are primarily driven by opportunity (68%) whereas informal entrepreneurs are primarily driven by necessity (64%) and are statistically different ($p < .001$). Lastly, Figure 2.24 illustrates the relationship between formality and family businesses and is statistically significant ($p < .01$). Family businesses comprise roughly 50% of formal firms while only 34% of informal firms are family businesses.

Crossing Institutional Boundaries

The interaction between institutional environments may be an important antecedent to exiting the informal economy (Skousen & Mahoney, 2015). Yet, what remains unexamined is our understanding of the antecedents that influence whether or not entrepreneurs who are operating in informal institutional environments (quadrants 1 and 2) will venture outside their informal institutional environment by crossing institutional boundaries into more formal institutional environments (quadrants 3 and 4). Crossing institutional boundaries influences the entrepreneur's ability to identify, evaluate, and exploit entrepreneurial opportunities which has important implications for transitioning out of the informal economy (Bruton *et al*., 2013; Ketchen, Ireland, & Webb, 2014).

Figure 2.25 illustrates crossing institutional boundaries for clients and suppliers by formality. Formality is statistically associated with both crossing for clients and for suppliers at $p < .001$ suggesting that formal entrepreneurs in quadrant 2 are more likely to cross institutional boundaries as they may encounter less normative friction from competing institutions. Figure 2.26 indicates that gender is associated with crossing institutional boundaries at $p < .001$ for both clients and suppliers. Males tend to have a greater propensity to go beyond adjacent neighborhoods bordering Manguinhos. Figure 2.27 illustrates the relationship between motivation and crossing institutional boundaries. Only crossing institutional boundaries for suppliers was statistically significant ($p < .001$) (See Table 2.4), suggesting that entrepreneurs motivated by opportunity tend to be more likely to cross institutional boundaries for suppliers relative to those motivated by necessity. Figure 2.28 indicates that crossing institutional boundaries for both clients and suppliers increases as educational attainment increases. Figure 2.29 illustrates the relationship between family businesses and crossing institutional boundaries and finds a statistical difference for both groups at $p < .001$. However, as figure 2.29 illustrates, family businesses tend to be have a greater propensity to cross institutional boundaries for suppliers but exhibit lower levels for clients relative to non-family businesses.

Industry of Entrepreneur

Distinguishing between industry and characteristics of the entrepreneur and his/her business illustrates some interesting trends. Figure 2.30 provides industry by formality and suggests that formality is highly influenced by which industry the entrepreneur operates in (See Table 2.5). For example, over half (61%) of formal businesses operate grocery stores, general retail or provide general services. Very few entrepreneurs in industries such as domestic services, seamstress services, handicrafts, general contractors or confectioners register their businesses. Figure 2.31 provides industry by gender. The industry an entrepreneur operates in appears to be highly influenced by gender as there are statistically significant differences for all industries except professional services (See Table 2.6). For example, females are not represented in taxi services or contractors while males are generally not involved in domestic services, seamstress services or handicrafts. Figure 2.33 illustrates industry by family. Operating as a family business also strongly influences which industry the entrepreneur operates in as statistical differences are evident across industries except for professional services and taxi services (See Table 2.7). Most notable is that family businesses tend to work in the food industry as family businesses have a disproportionate share of entrepreneurs in Bar/Snack Bar and grocery store categories. Figure 2.32 illustrates industry by motivation for starting a business. Motivation appears to have a weaker association than formality, gender, and operating as a family business (See Table 2.8). Entrepreneurs driven by necessity appear to have a strong relationship with domestic services while those driven by opportunity have a strong relationship with general services and retail.

Discussion and Conclusion

The purpose of this dissertation chapter was to examine entrepreneurship in informal institutional environments. A number of interesting trends emerged that have important theory and research implications. The first concerns the antecedents to entrepreneurship. Entrepreneurship research has a long history of examining who becomes an entrepreneur and how they identify opportunities (e.g., Carland, Hoy, & Carland, 1988; Kirzner, 1973; Schumpeter, 1976; Shane, 2000; Shepherd & DeTienne, 2005; Singh, Hills, Hybels, & Lumpkin, 1999); however, this research stream has not adequately considered these questions in informal institutional environments (Bruton, *et al*., 2013). Two notable differences identified here are the entrepreneur's motivation and human capital. First, findings presented in this chapter indicate that entrepreneurial motivation in informal institutional environments is quite heterogeneous in nature. To date, entrepreneurship research has not addressed how motivations for starting a business influence the strategic behavior of entrepreneurs in informal institutional environments. Second, human capital is an important antecedent to entrepreneurial entry and outcomes but the general tendencies identified in this chapter suggest that human capital may have fundamentally different effects than in more formal institutional contexts. For example, what does the role of industry experience play in opportunity identification and exploitation? Interestingly, entrepreneurs in Manguinhos exhibit much lower levels of industry experience relative to entrepreneurs in more formal institutional contexts. As a consequence, how do entrepreneurs operating in informal institutional environments leverage what they have learned to identify and subsequently exploit opportunities that are in different industries?

Entrepreneurs in Manguinhos also tend to exhibit lower levels of being serial entrepreneurs and a considerable amount of entrepreneurs (8%) have "always worked in the same manner" or in other words have no other experience beyond the business that they currently operate. This reality raises interesting questions about research on entrepreneurial persistence (e.g., DeTiennee, Shepherd, & De Castro, 2008; Gimeno, *et al.*, 1997; Holland & Shepherd, 2013). For example, what is the relationship with persistence and subsistence entrepreneurship? What is the relationship with persistence and entrepreneurs that attempt to grow in informal institutional environments? Do entrepreneurs that enter entrepreneurship out of necessity exit when employment opportunities become available or do they persist with their entrepreneurial venture? These questions have not been adequately addressed and future research would benefit from examining such questions.

In the remaining chapters of this dissertation, I focus on examining entrepreneurs in informal institutional environments who exit the informal economy through registration and who interact with economic actors across institutional boundaries as outlined in figures 1.1, 1.2, and 1.3. I examine these questions under the assumption that such behavior increases the entrepreneur's ability to transform his/her business from a micro-organization that supports subsistence to one that generates surplus income and therefore has important implications for research on the informal economy and poverty (Bruton 2010; Godfrey, 2015; Skousen & Mahoney, 2015; Webb *et al.*, 2009a).

FIGURES FOR CHAPTER 2

Figure 2.1: Number of Entrepreneurs by Gender and Age

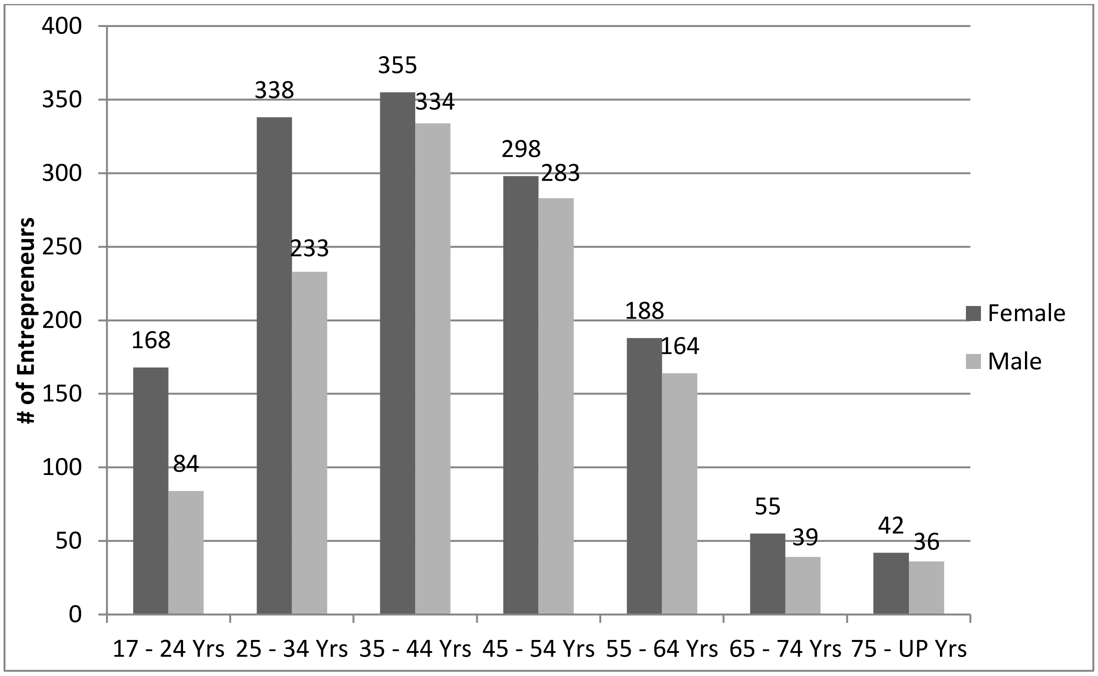


Figure 2.2: Percentage of Entrepreneurs by Gender and Age

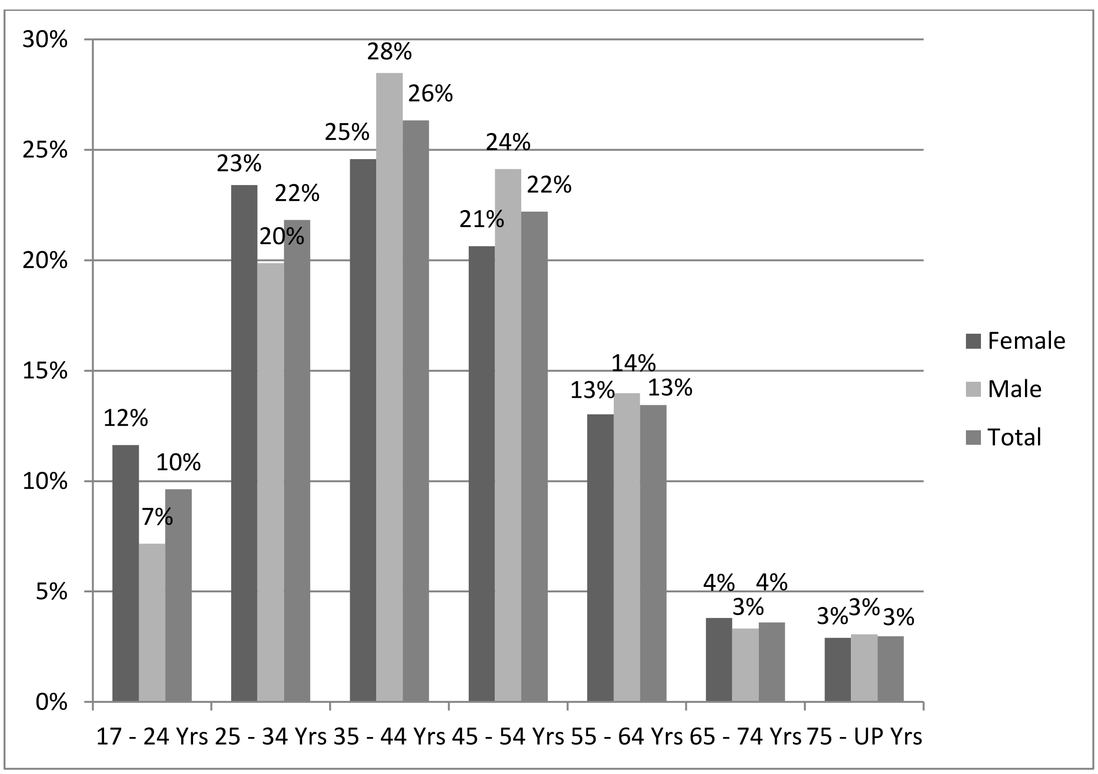


Figure 2.3: Percentage of Entrepreneurs within Age Group by Gender

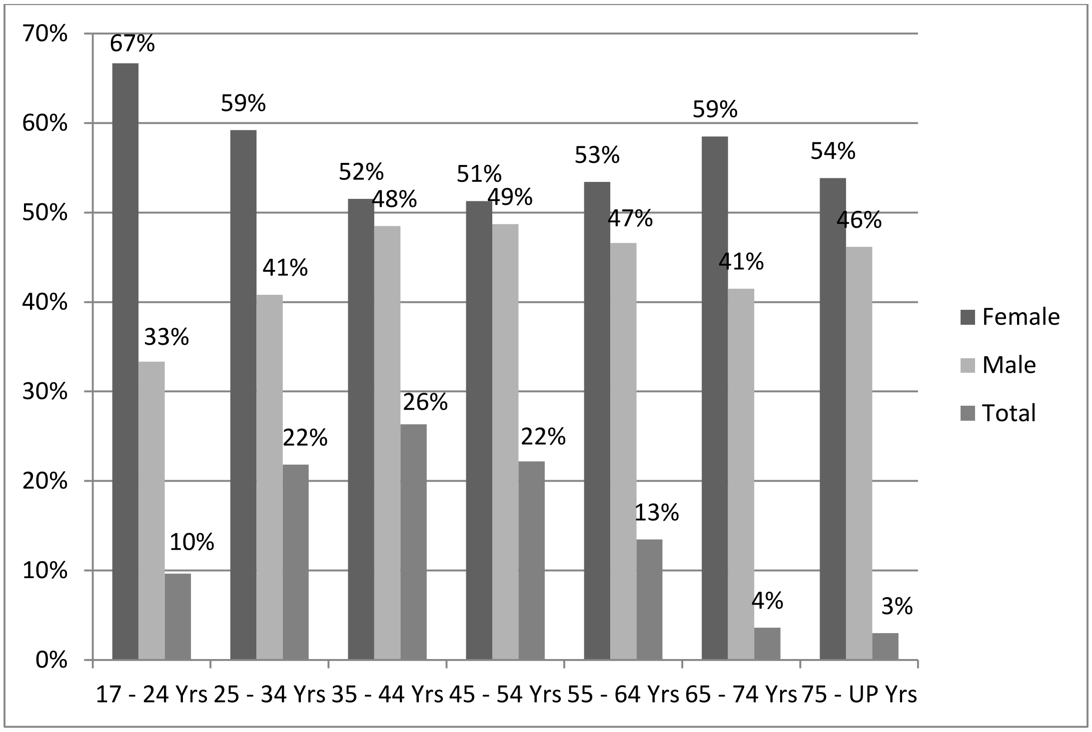


Figure 2.4: Percentage of Entrepreneurs by Educational Attainment and Gender

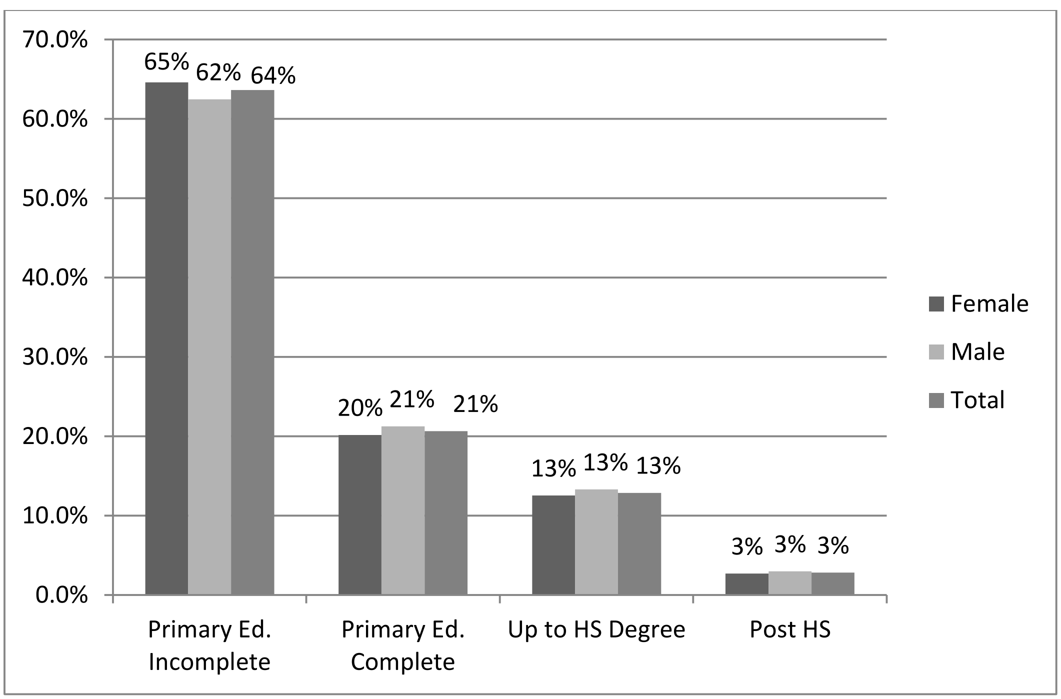


Figure 2.5: Educational Attainment by Age Group

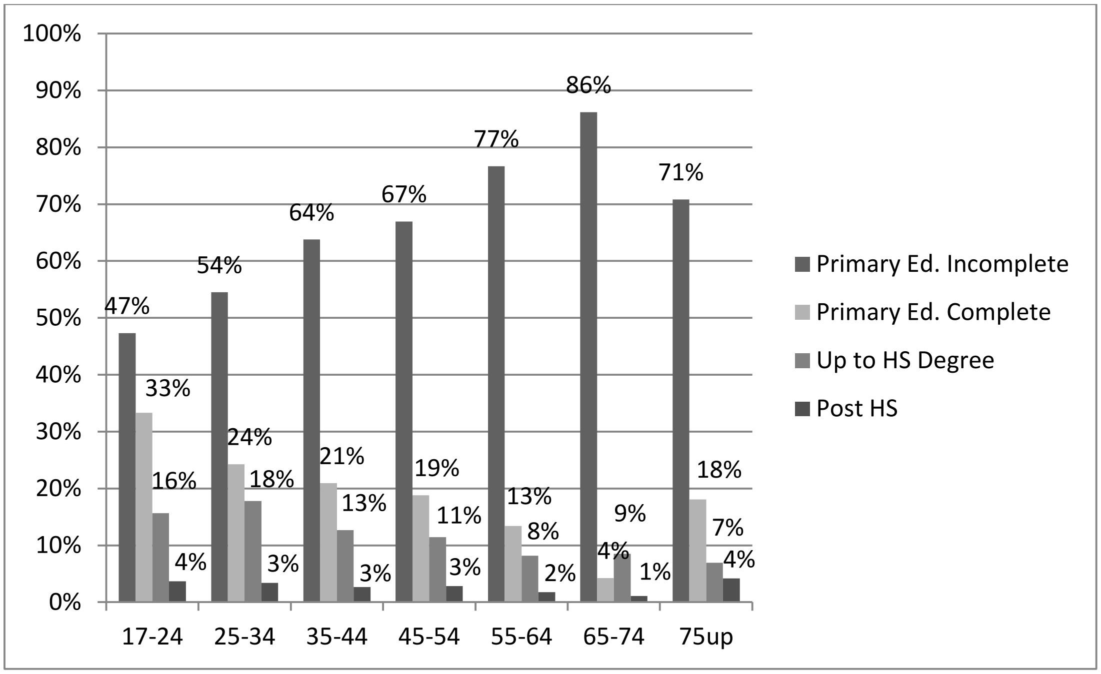


Figure 2.6: Previous Experience Prior to Entrepreneurship

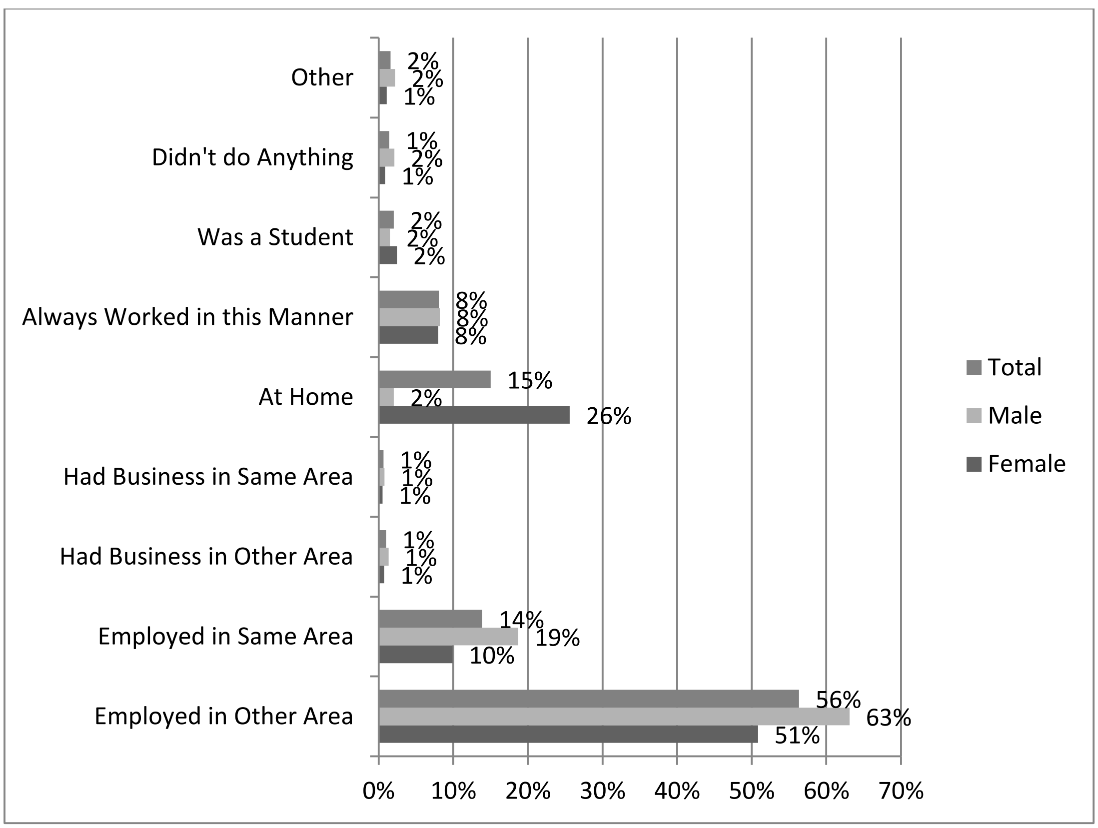


Figure 2.7: Industry Experience by Gender

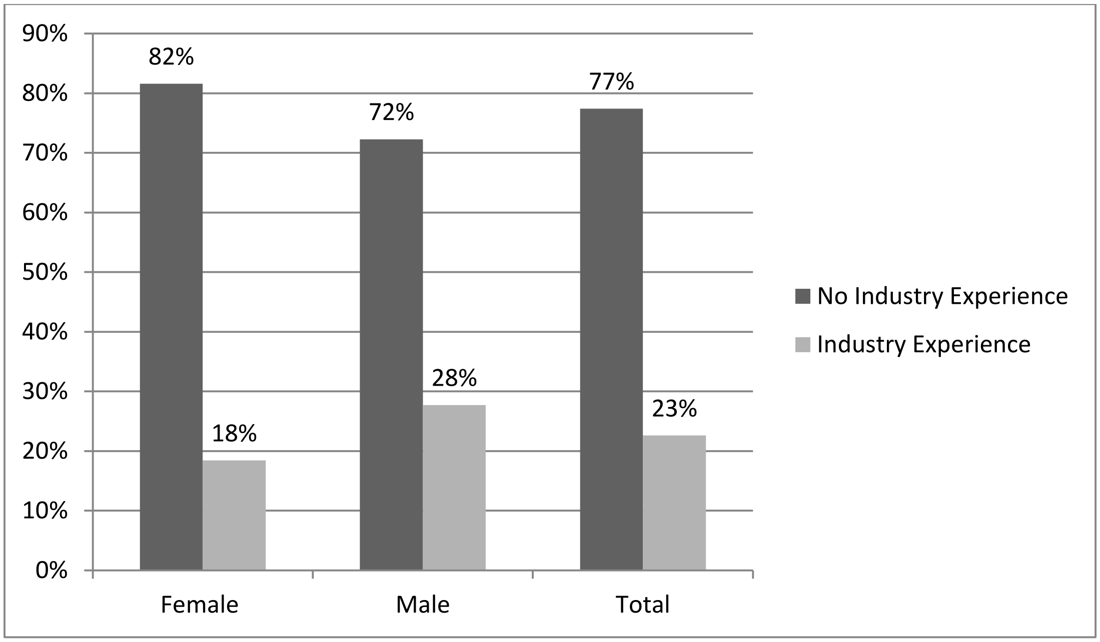


Figure 2.8: Employment Experience by Gender

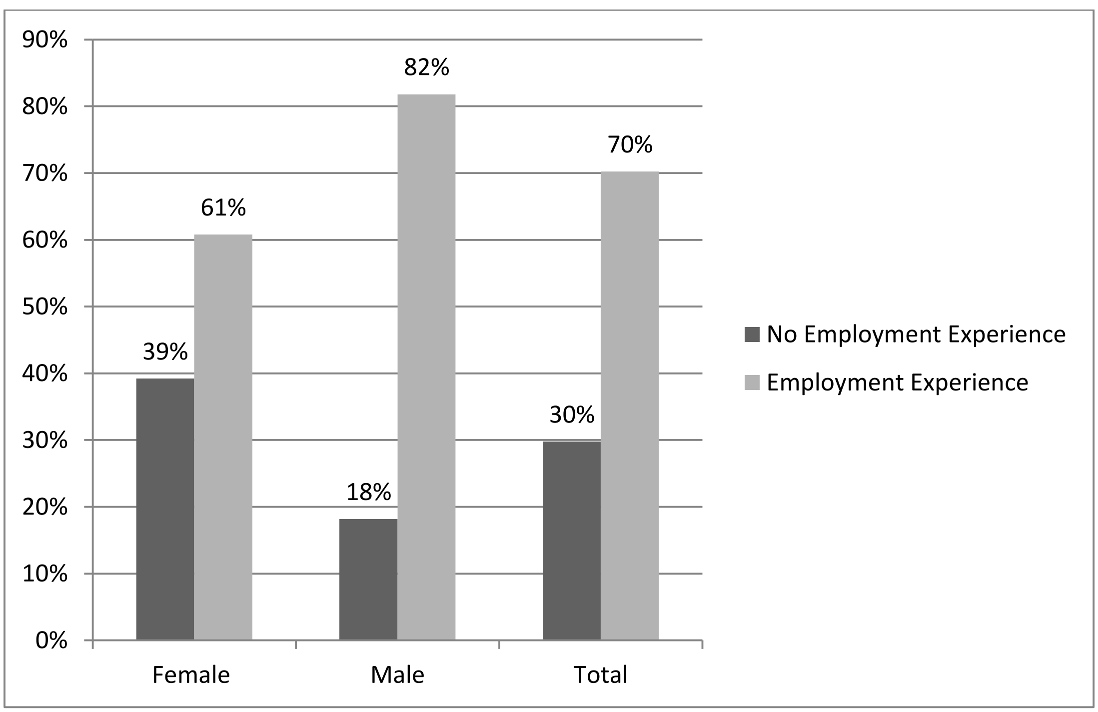


Figure 2.9: Prior Start-up Experience by Gender

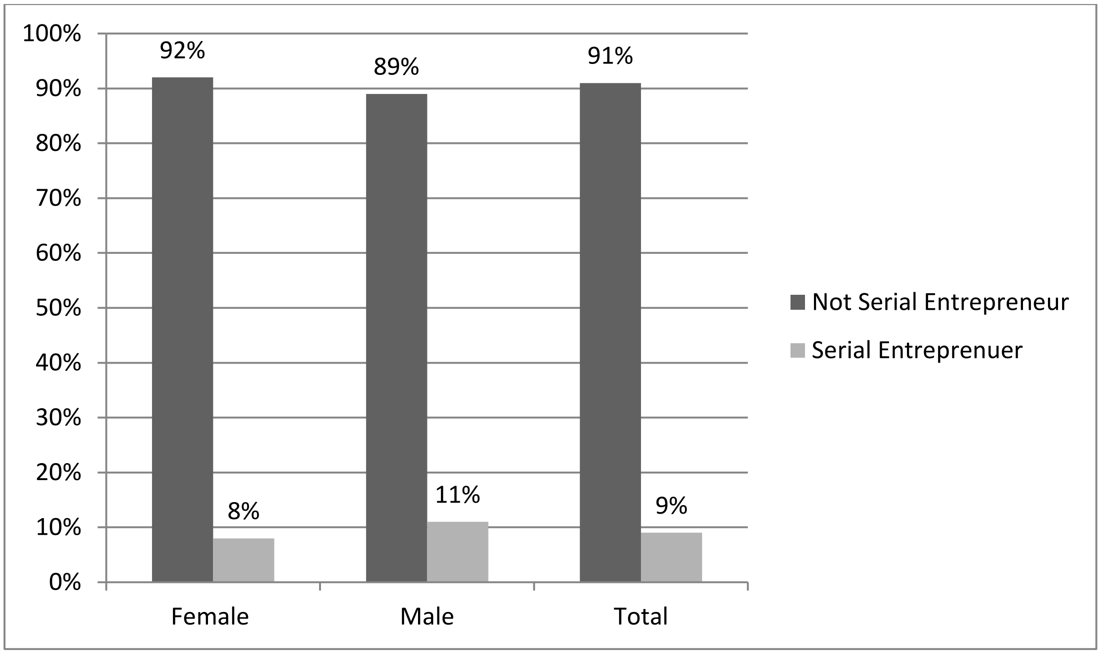


Figure 2.10: Start-up Motivation by Gender

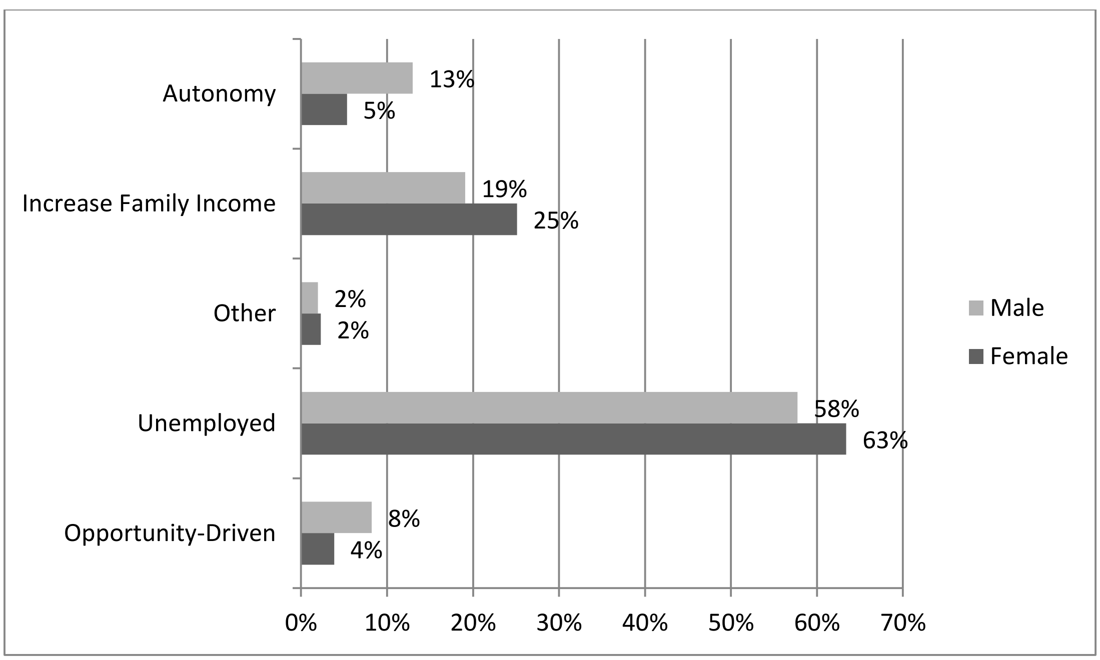


Figure 2.11 Necessity and Opportunity Motivation by Gender

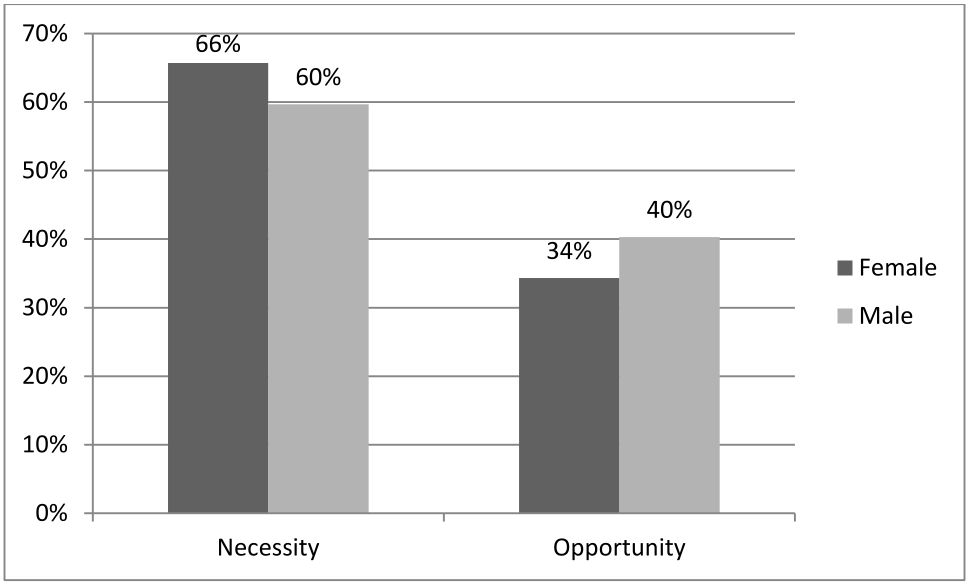


Figure 2.12: Percentage of Family Businesses by Gender

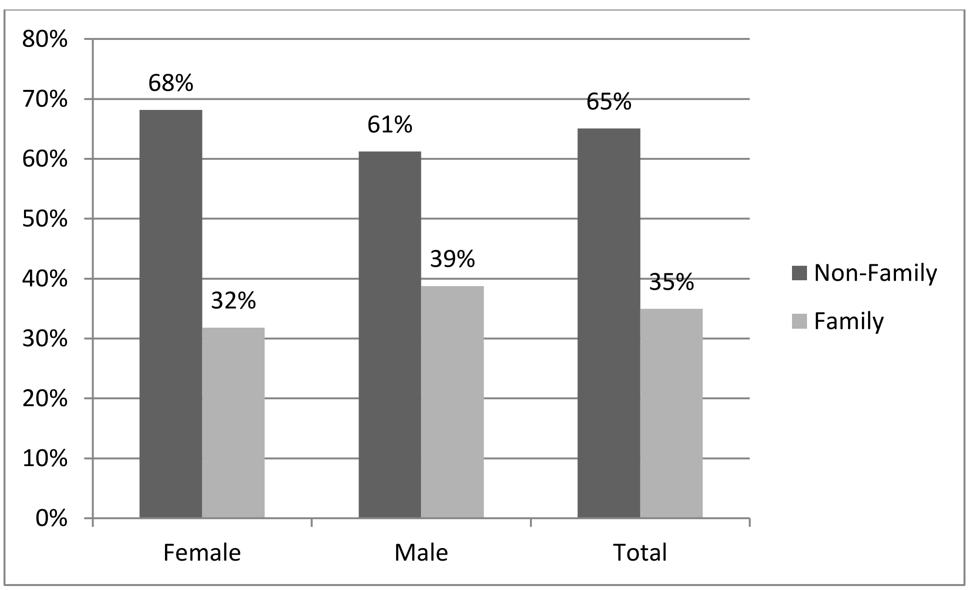


Figure 2.13: Educational Attainment by Family Business

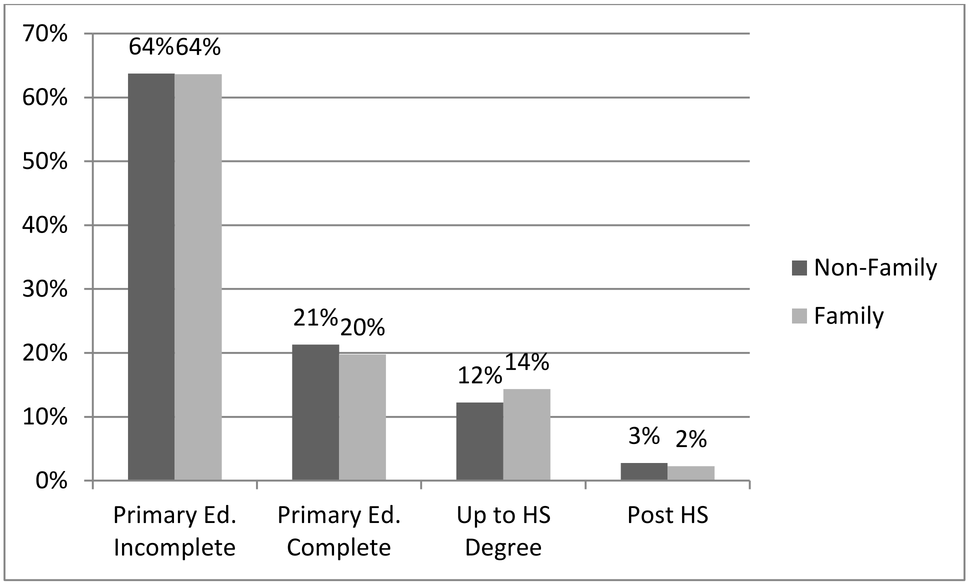


Figure 2.14: Industry Experience by Family Business

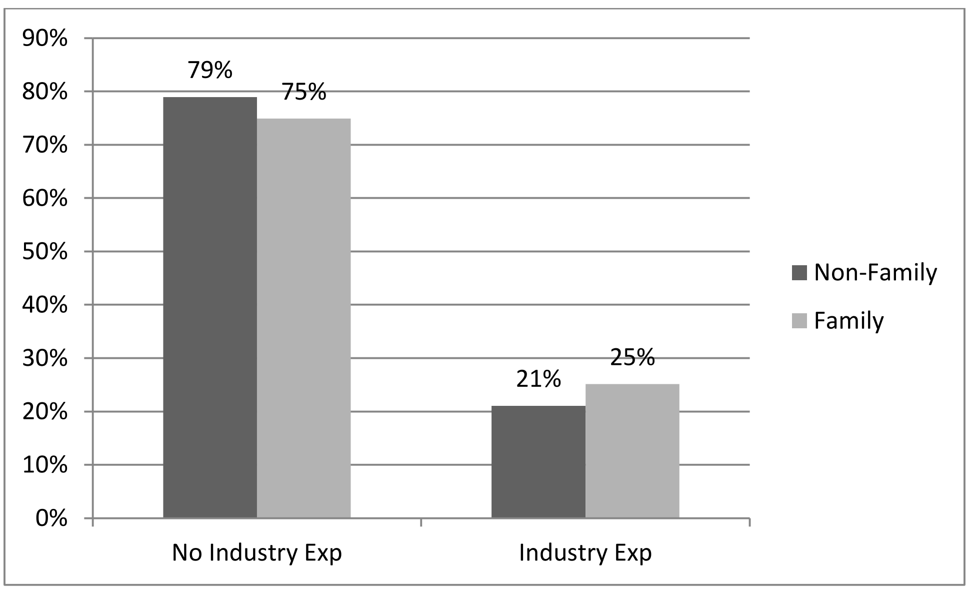


Figure 2.15: Employment Experience by Family Business

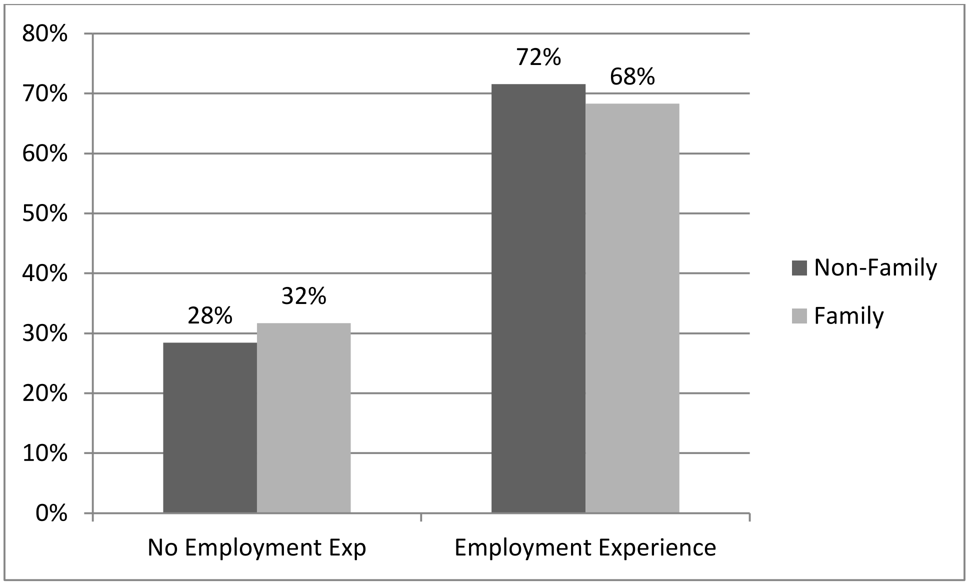


Figure 2.16: Serial Entrepreneur by Family Business

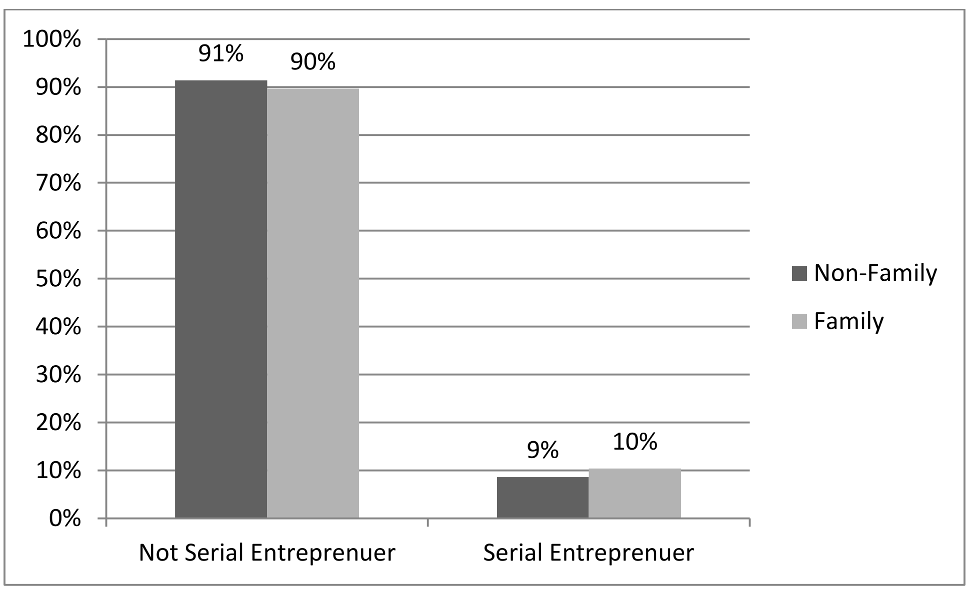


Figure 2.17: Necessity and Opportunity Motivation by Family Business

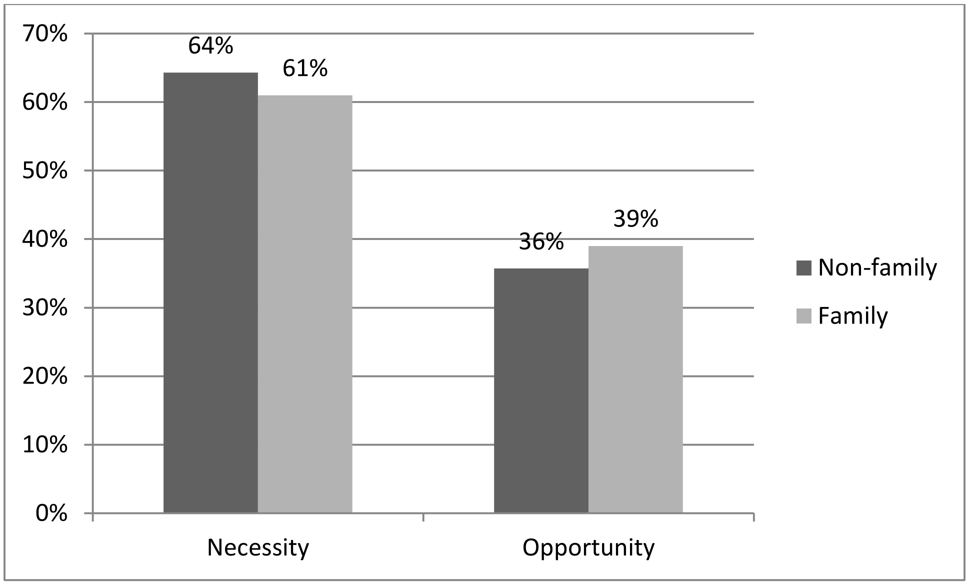


Figure 2.18: Formality by Gender

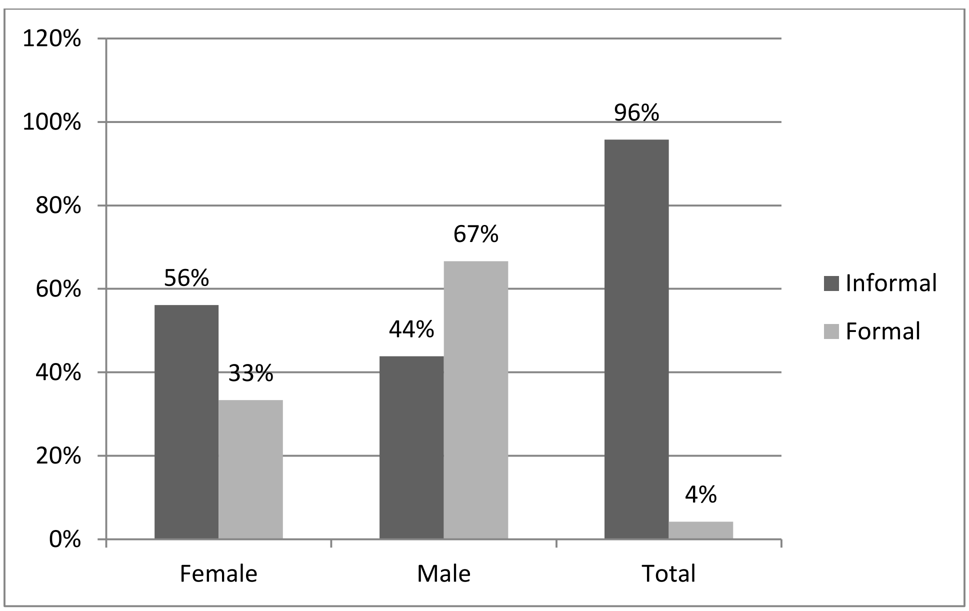


Figure 2.19: Educational Attainment by Formality

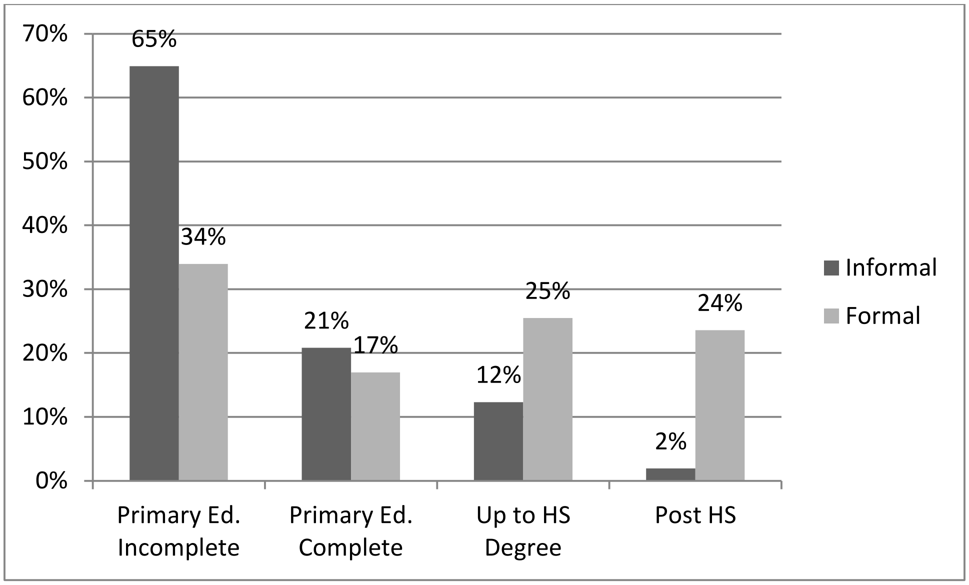


Figure 2.20: Industry Experience by Formality

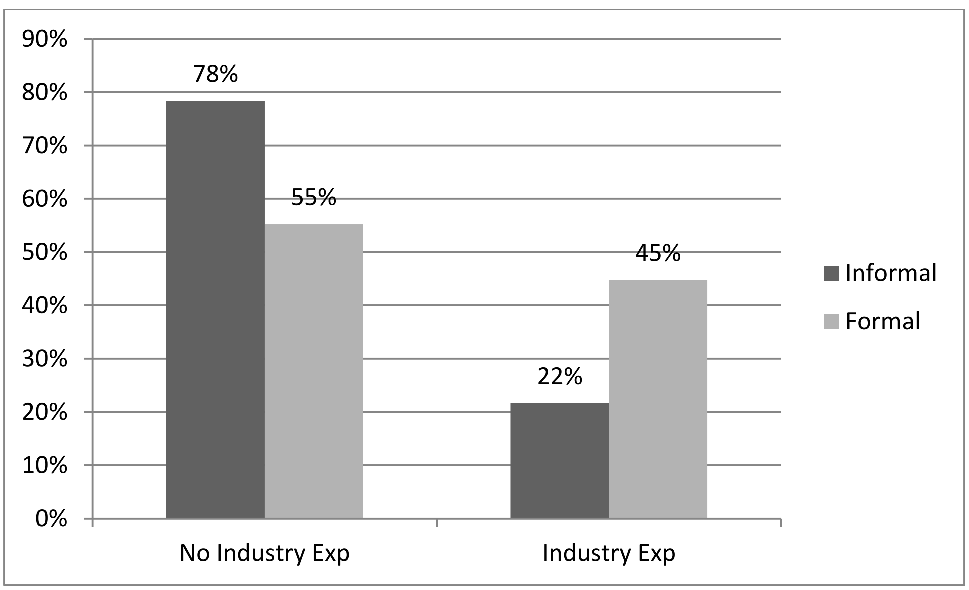


Figure 2.21: Employment Experience by Formality

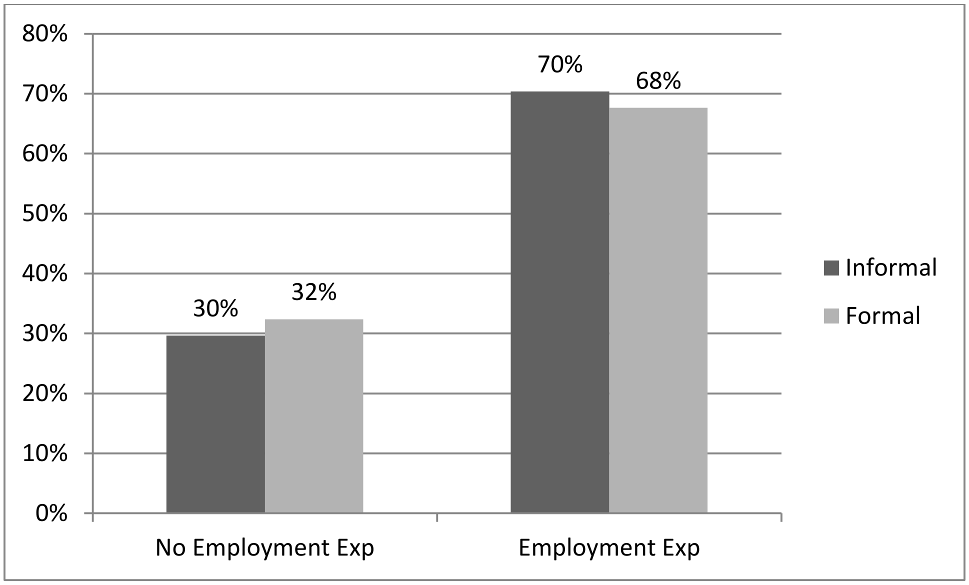


Figure 2.22: Serial Entrepreneur by Formality

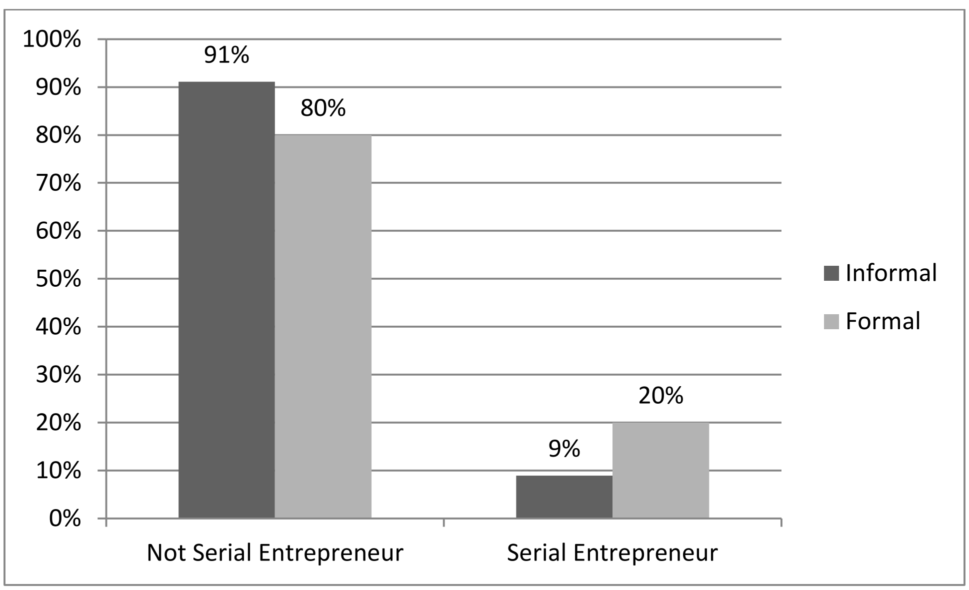


Figure 2.23: Necessity and Opportunity Motivation by Formality

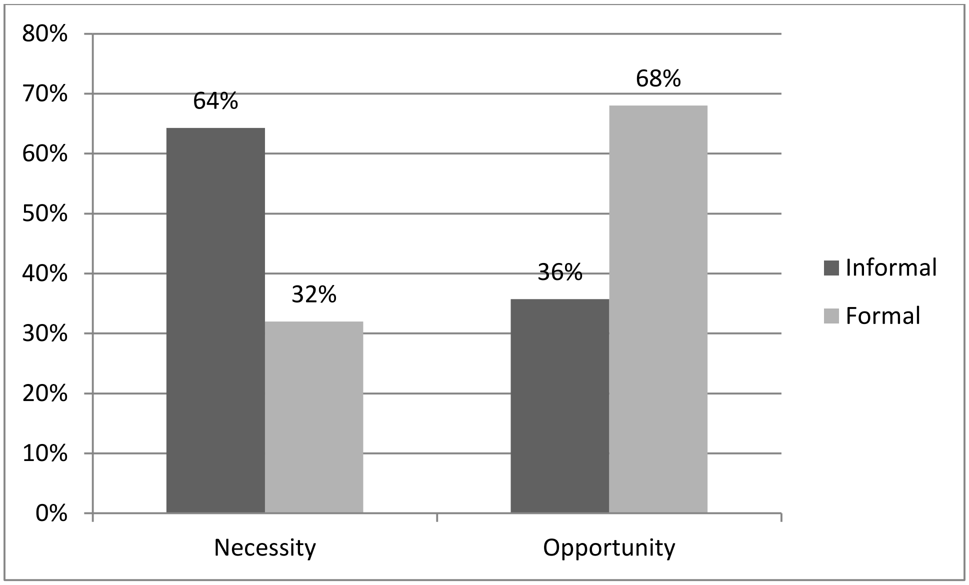


Figure 2.24: Percentage of Family Businesses by Formality

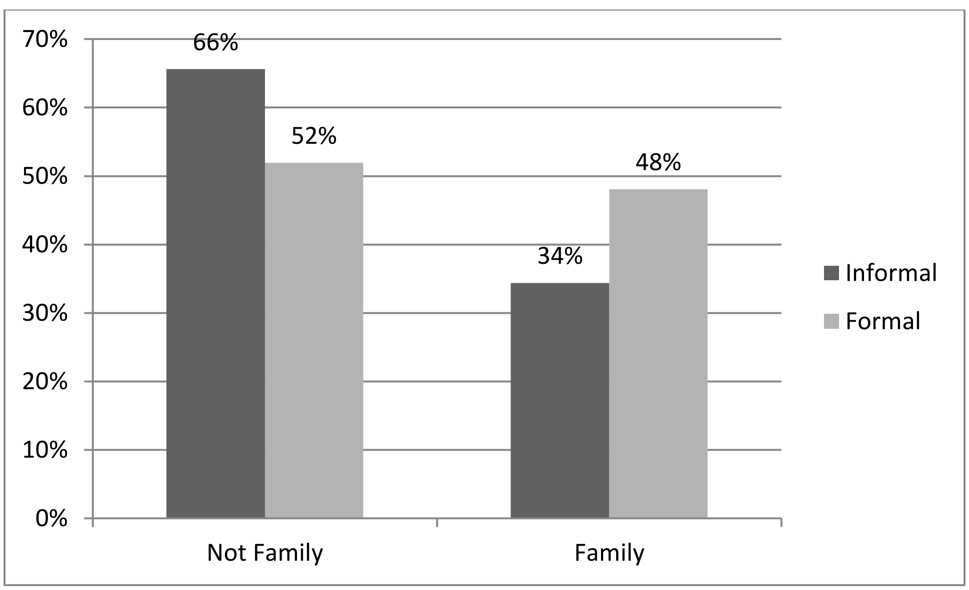


Figure 2.25: Crossing Instiutional Boundaries for Clients and Suppliers by Formality

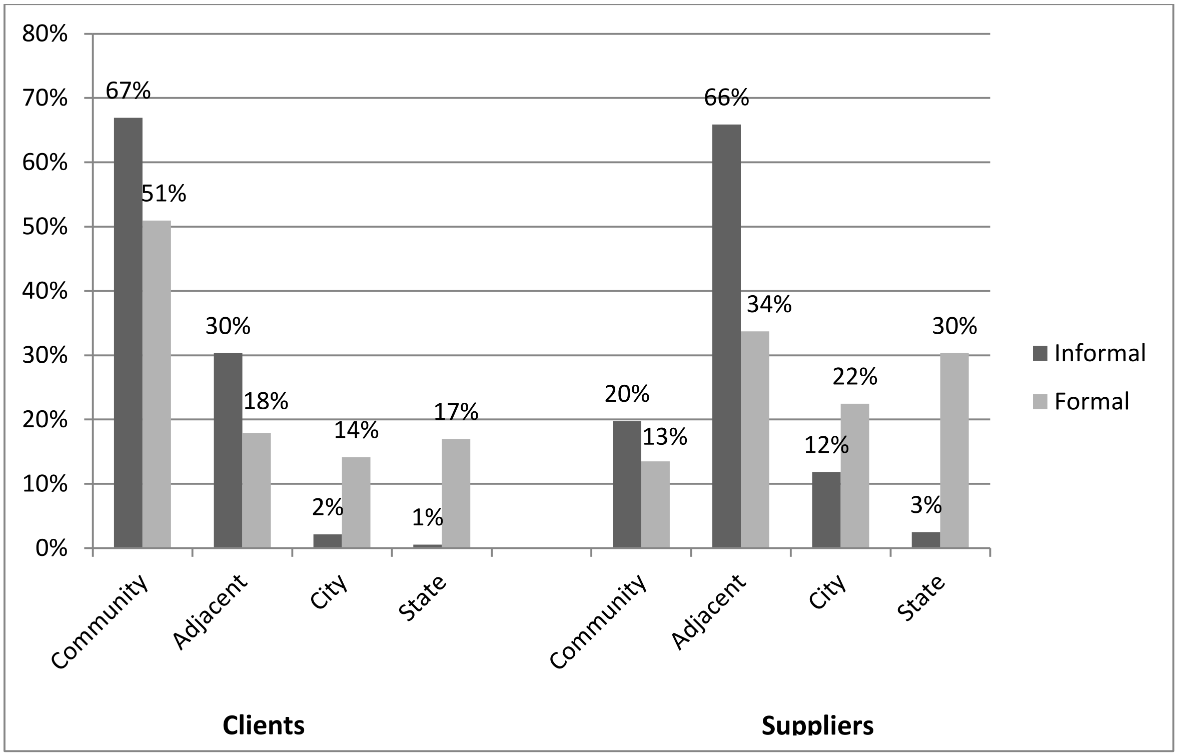


Figure 2.26: Crossing Institutional Boundaries for Clients and Suppliers by Gender

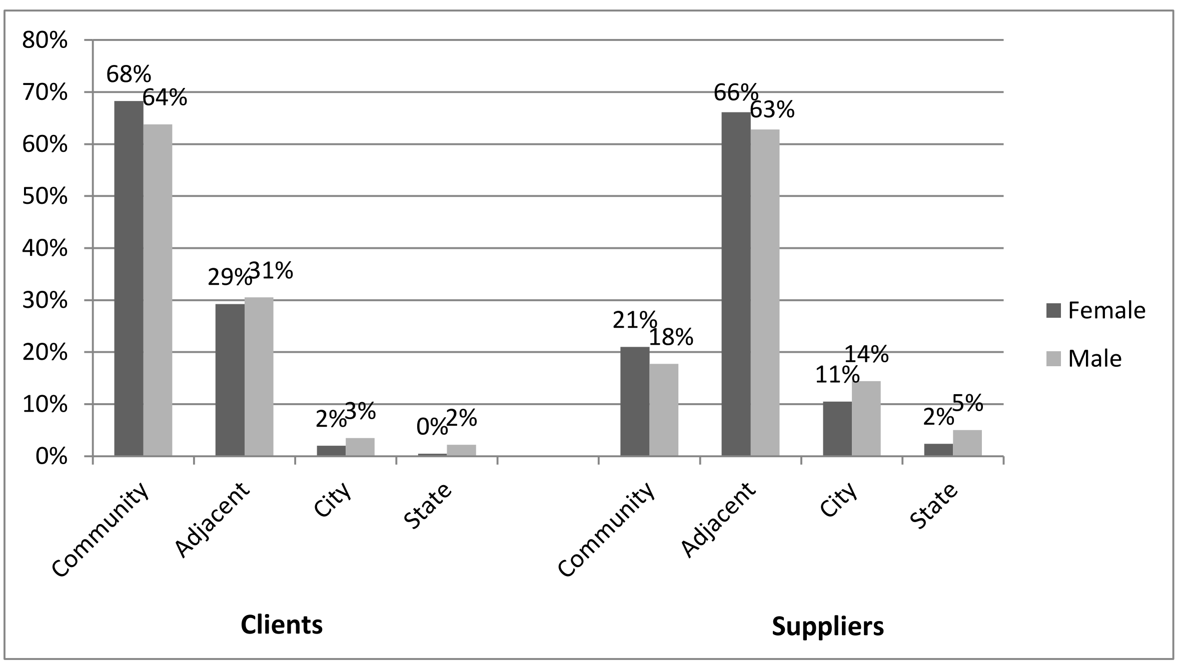


Figure 2.27: Crossing Boundaries for Clients and Suppliers by Necessity and Opportunity Motvation

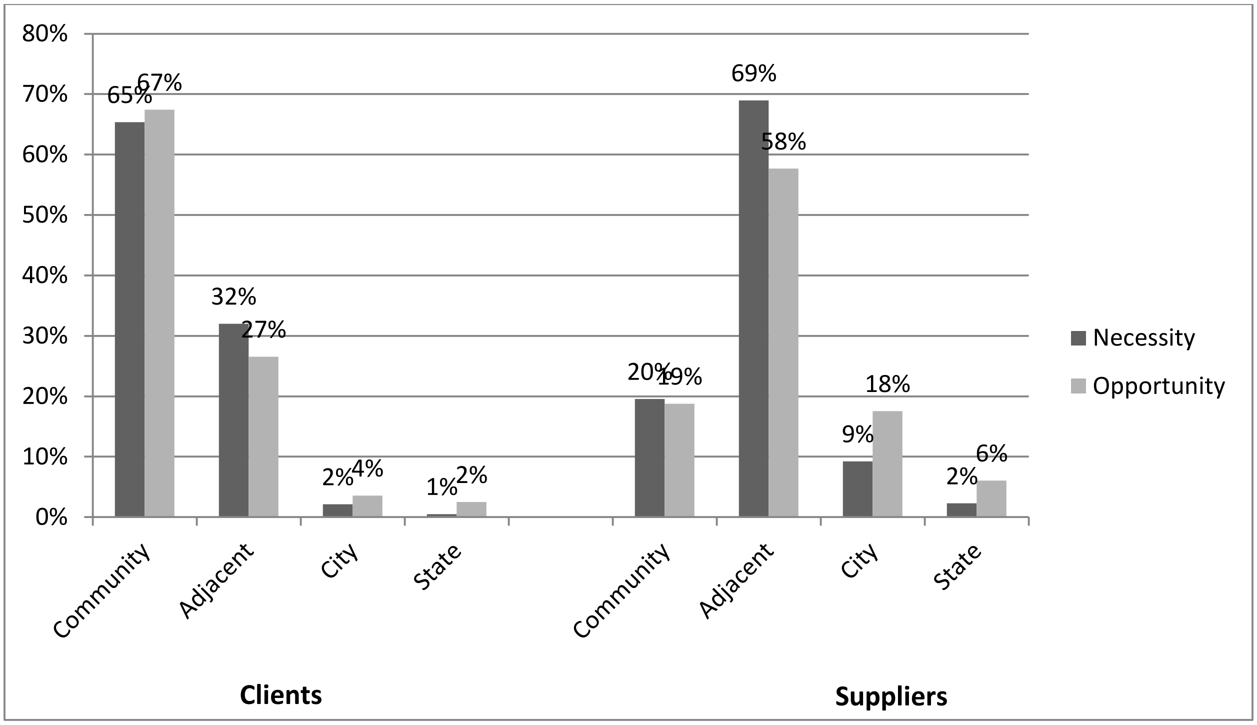


Figure 2.28: Crossing Institutional Boundaries for Clients and Suppliers by Educational Attainment

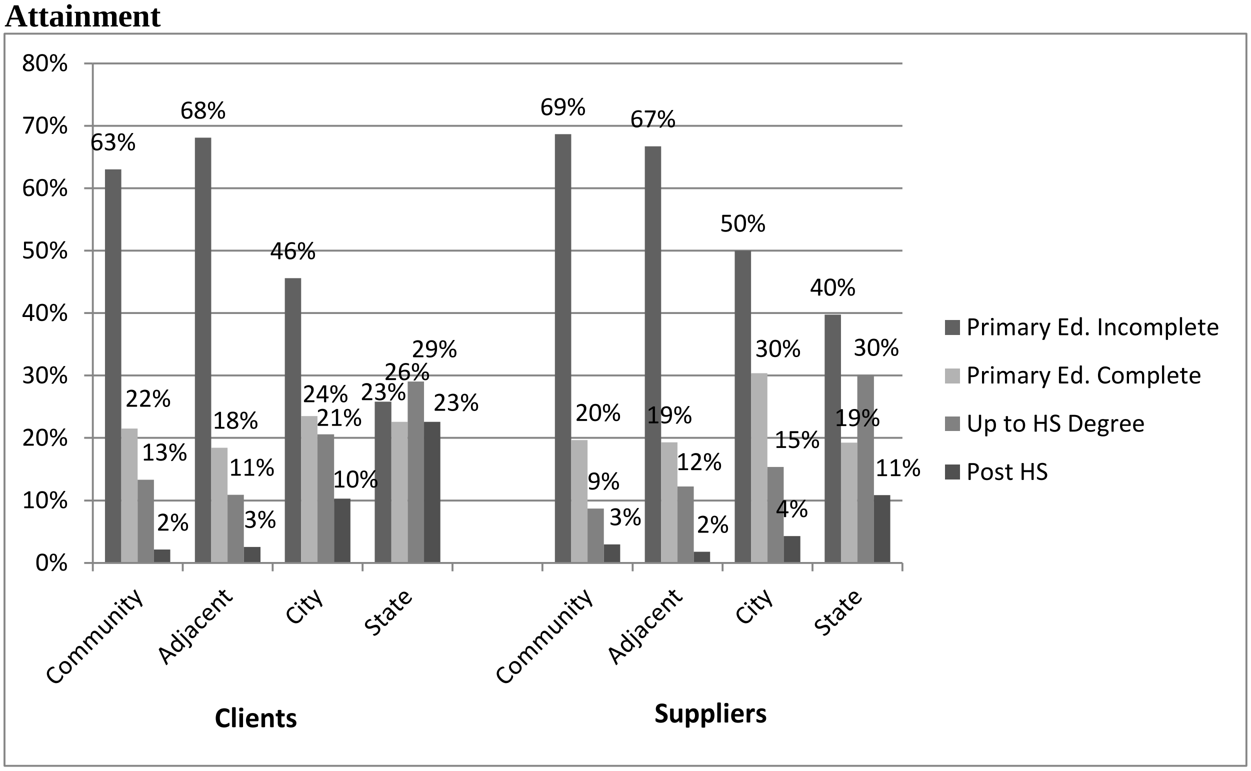


Figure 2.29: Crossing Institutional Boundaries for Clients and Suppliers by Family Business

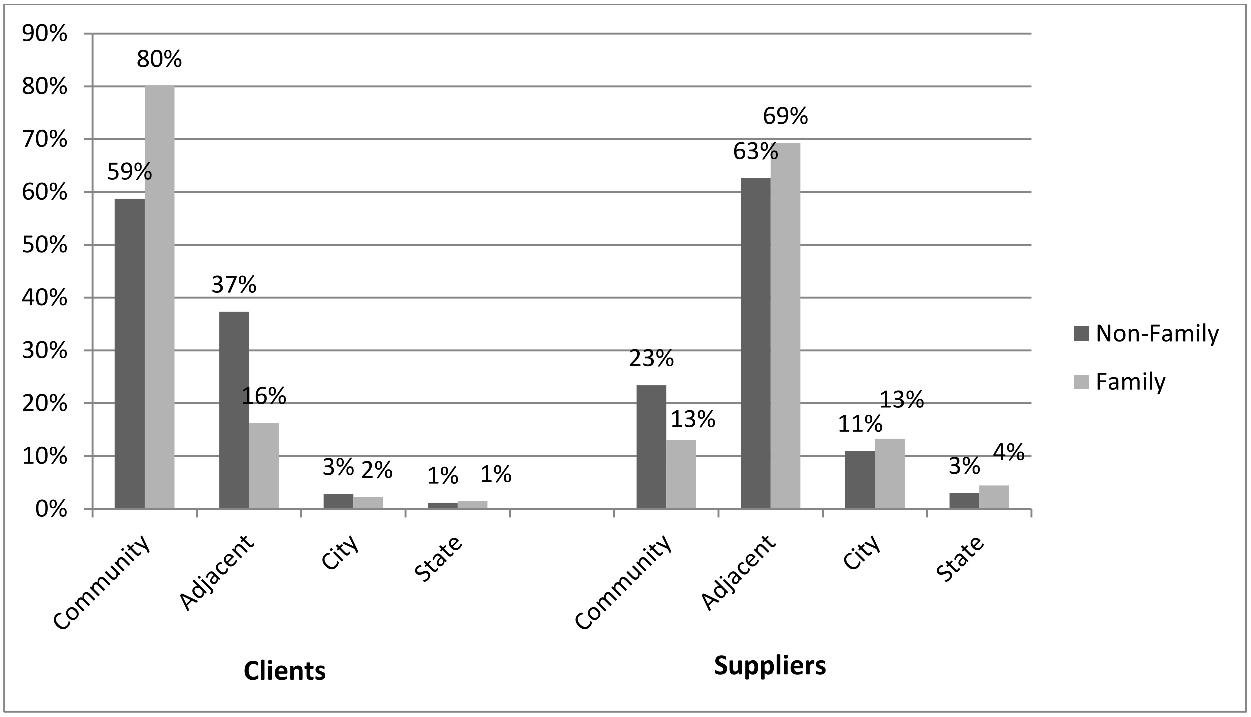


Figure 2.30: Industry of the Entrepreneur by Formality

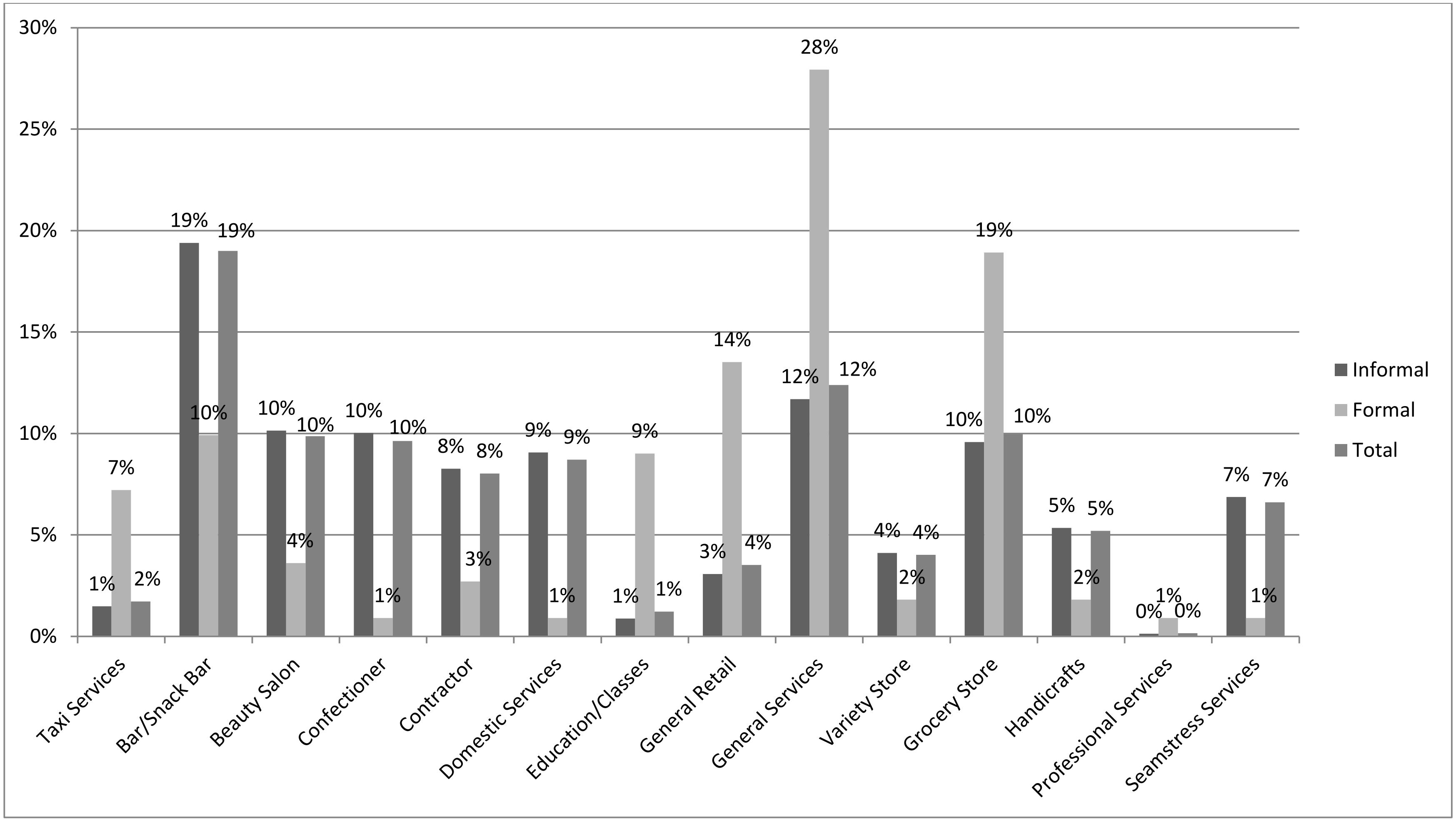


Figure 2.31: Industry of the Entrepreneur by Gender

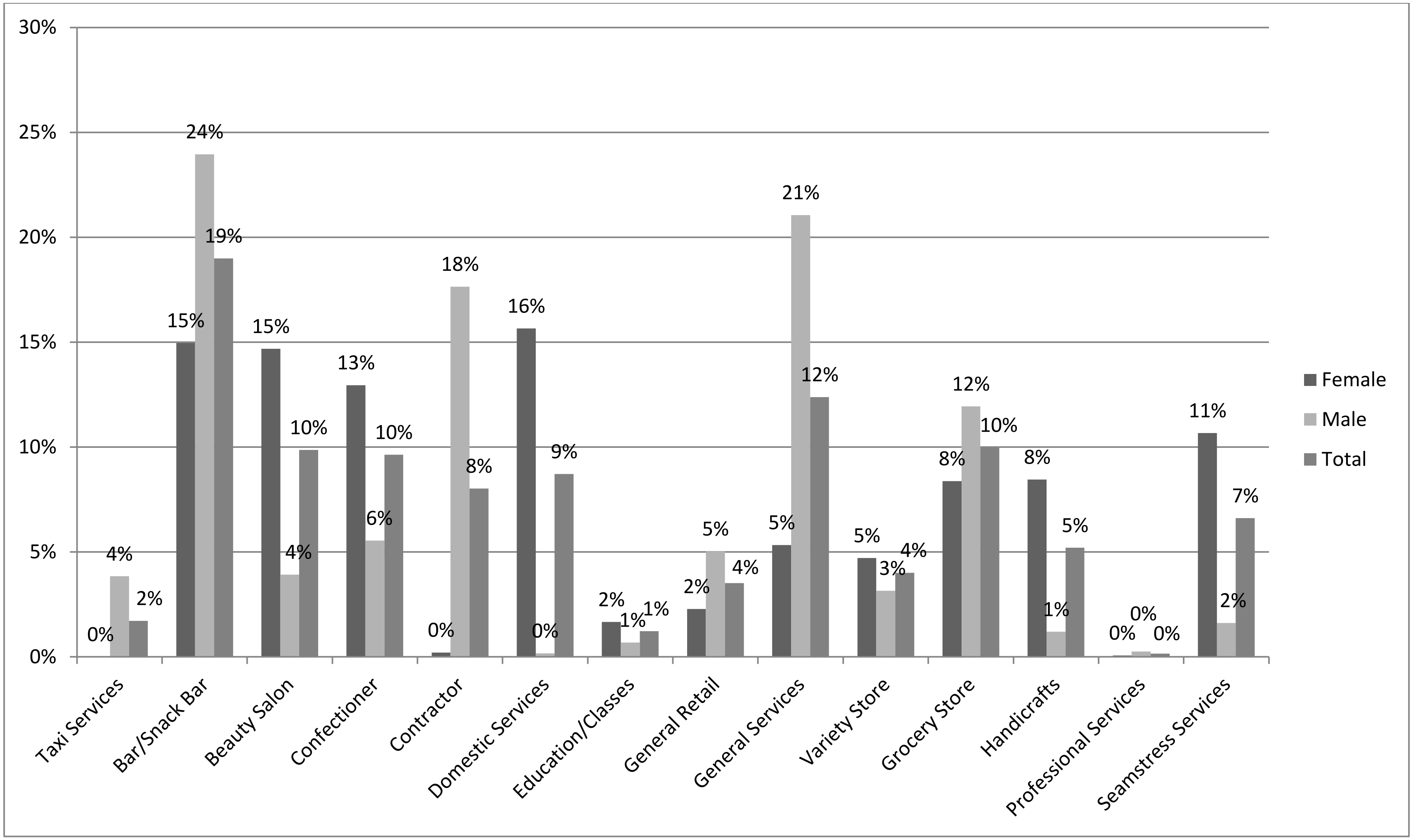


Figure 2.32: Industry of the Entrepreneur by Necessity and Opportunity Motivation

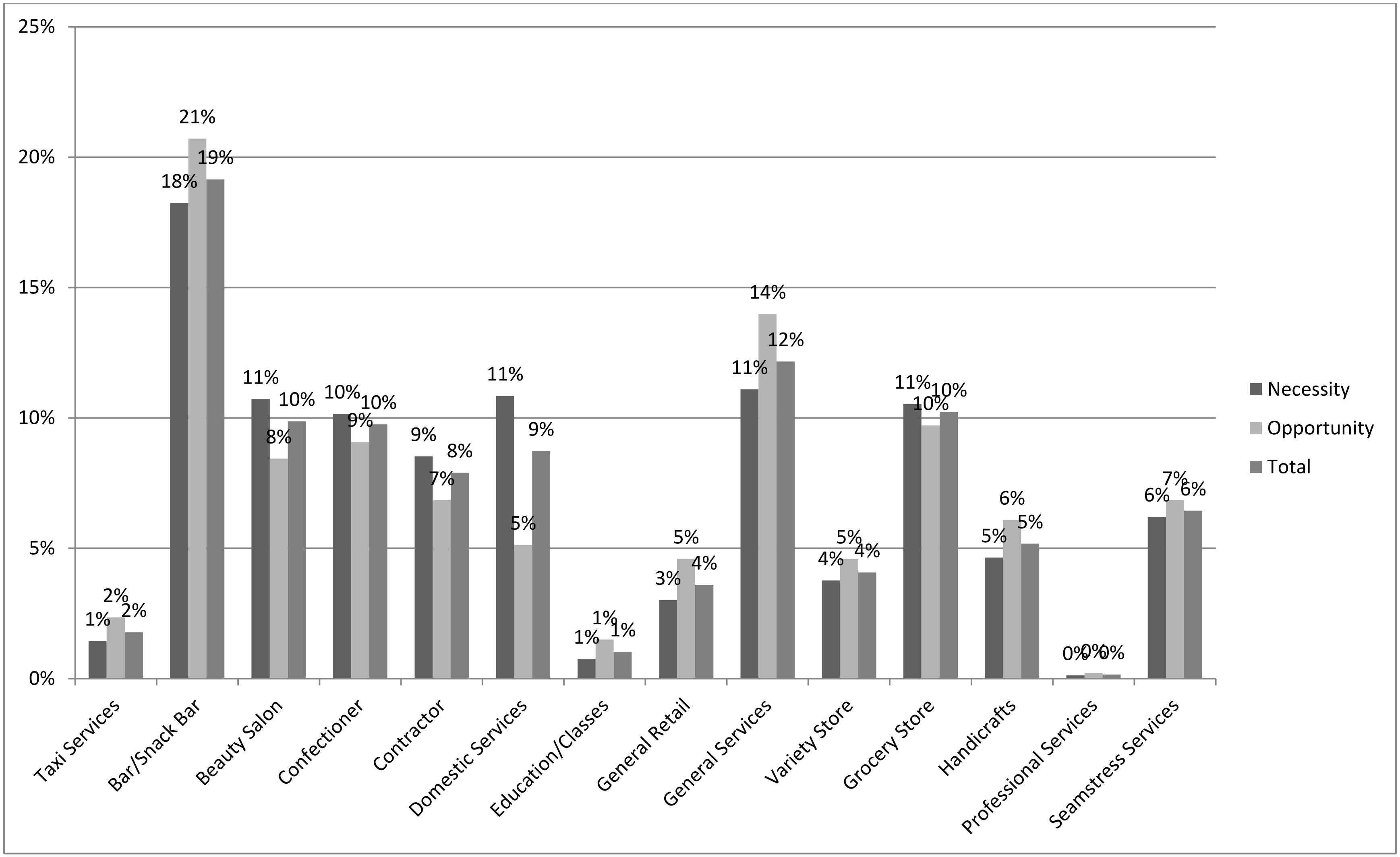


Figure 2.33: Industry of the Entrepreneur by Family Business

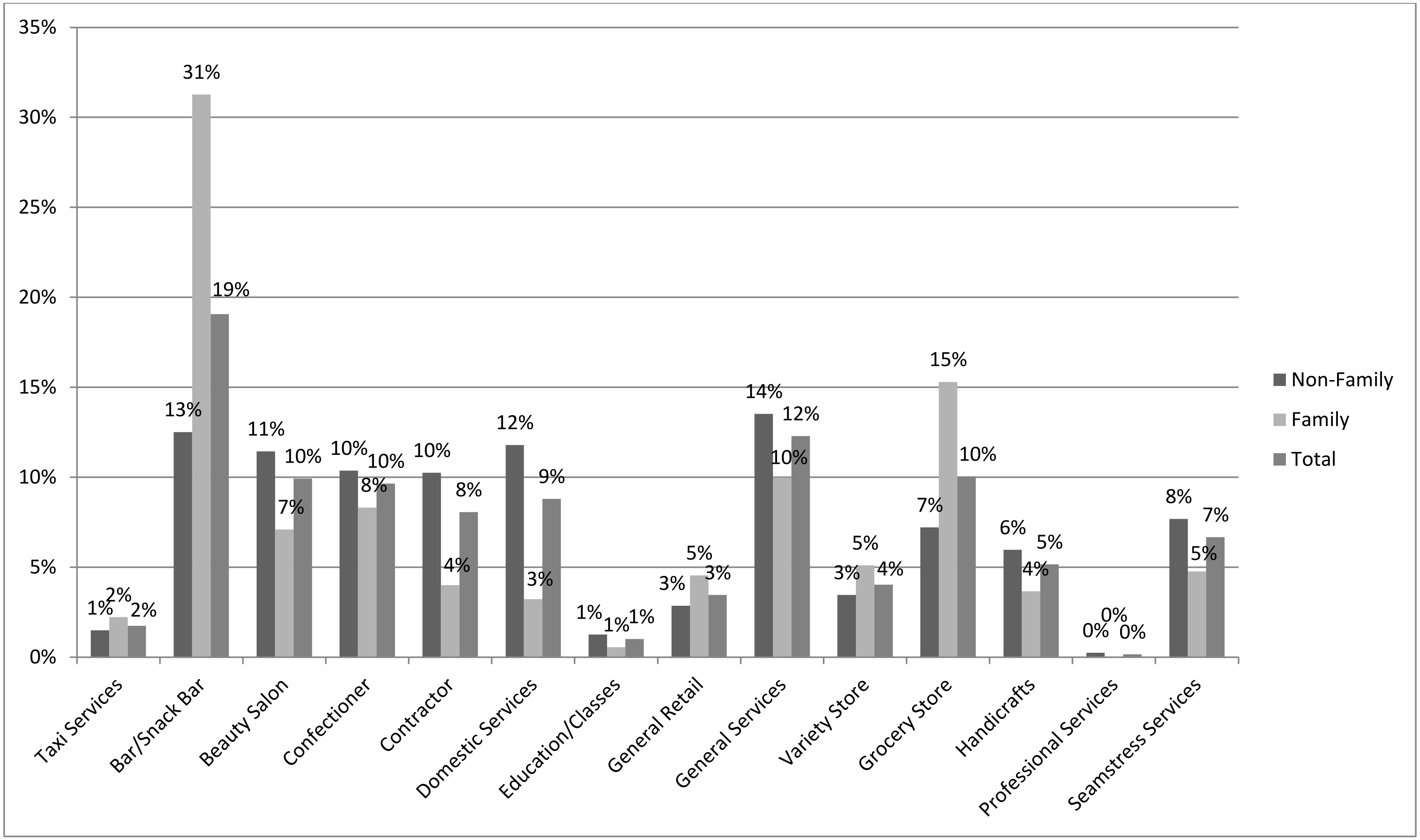


Table 2.1: T-Statistics of Characteristics of the Entrepreneur by Gender

Variable	by	T-Stat	Pr> |t|		Observations
Education	Gender	-0.527	0.598		2556
Formal	Gender	-4.748	0.000	***	2617
Storefront	Gender	-13.947	0.000	***	2407
Age Groups:					
age17to24	Gender	3.867	0.000	***	2617
age25to34	Gender	2.184	0.029	*	2617
age35to44	Gender	-2.248	0.025	*	2617
age45to54	Gender	-2.137	0.033	*	2617
age55to64	Gender	-0.717	0.473		2617
age65to74	Gender	0.662	0.508		2617
age75Up	Gender	-0.240	0.810		2617
education	Gender	-0.527	0.598		2556
industry experience	Gender	-5.586	0.000	***	2523
employment experience	Gender	-11.798	0.000	***	2523
Serial Entrepreneur	Gender	-2.550	0.011	*	2493
Motivation	Gender	-3.120	0.002	**	2533

Table 2.2: T-Statistics of Characteristics of the Entrepreneur by Family Business

Variable	by	T-Stat	Pr> |t|		Observations
Gender	Family	-3.686	0.000	***	2581
Education	Family	0.396	0.692		2521
industry experience	Family	-2.330	0.020	*	2492
employment experience	Family	1.706	0.088	†	2492
Serial Entrepreneur	Family	-1.434	0.152		2469
Motivation	Family	-1.638	0.102		2503

Table 2.3: T-Statistics of Characteristics of the Entrepreneur by Formality

Variable	by	T-Stat	Pr> |t|		Observations
Gender	formal	-4.748	0.000	***	2617
Education	formal	-11.637	0.000	***	2556
industry experience	formal	-5.581	0.000	***	2523
employment experience	formal	0.598	0.550		2523
Serial Entrepreneur	formal	-3.745	0.000	***	2493
Motivation	formal	-6.607	0.000	***	2533
Family	formal	-2.870	0.004	**	2581

Table 2.4: T-Statistics on Crossing Institutional Boundaries for Clients and Suppliers

Crossing Institutional Boundaries	by	T-Stat	Pr> |t|		Observations
Clients	Formal	-10.340	0.000	***	2559
Clients	Gender	-3.901	0.000	***	2559
Clients	Motivation	-1.319	0.187		2483
Clients	Family	8.582	0.000	***	2532
Suppliers	Formal	-10.111	0.000	***	2328
Suppliers	Gender	-4.429	0.000	***	2328
Suppliers	Motivation	-5.636	0.000	***	2263
Suppliers	Family	-5.366	0.000	***	2309

Table 2.5: T-Statistics on Industry of Entrepreneur by Formality

Industry	by	T-Stat	Pr> |t|		Observations
Taxi Services	Formal	-4.561	0.000	***	2617
Bar/Snack Bar	Formal	2.495	0.013	*	2617
Beauty Salon	Formal	2.260	0.024	*	2617
Confectioner	Formal	3.191	0.001	**	2617
Contractor	Formal	2.110	0.035	*	2617
Domestic Services	Formal	2.986	0.003	**	2617
Education/Classes	Formal	-7.711	0.000	***	2617
General Retail	Formal	-5.881	0.000	***	2617
General Services	Formal	-5.106	0.000	***	2617
Variety Store	Formal	1.213	0.225		2617
Grocery Store	Formal	-3.219	0.001	**	2617
Handicrafts	Formal	1.647	0.100	†	2617
Professional Services	Formal	-2.063	0.039	*	2617
Seamstress Services	Formal	2.476	0.013	*	2617

Legend: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 2.6: T-Statistics on Industry of Entrepreneur by Gender

Industry	by	T-Stat	Pr> |t|		Observations
Taxi Services	Gender	-7.587	0.000	***	2617
Bar/Snack Bar	Gender	-5.872	0.000	***	2617
Beauty Salon	Gender	9.331	0.000	***	2617
Confectioner	Gender	6.438	0.000	***	2617
Contractor	Gender	-17.226	0.000	***	2617
Domestic Services	Gender	14.511	0.000	***	2617
Education/Classes	Gender	2.270	0.023	*	2617
General Retail	Gender	-3.800	0.000	***	2617
General Services	Gender	-12.499	0.000	***	2617
Variety Store	Gender	2.016	0.044	*	2617
Grocery Store	Gender	-3.023	0.003	**	2617
Handicrafts	Gender	8.425	0.000	***	2617
Professional Services	Gender	-1.214	0.225		2617
Seamstress Services	Gender	9.413	0.000	***	2617

Legend: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, ***$p < 0.001$

Table 2.7: T-Statistics on Industry of Entrepreneur by Family Business

Industry	by	T-Stat	Pr> |t|		Observations
Taxi Services	Family	-1.348	0.178		2581
Bar/Snack Bar	Family	-11.874	0.000	***	2581
Beauty Salon	Family	3.524	0.000	***	2581
Confectioner	Family	1.681	0.093	†	2581
Contractor	Family	5.596	0.000	***	2581
Domestic Services	Family	7.411	0.000	***	2581
Education/Classes	Family	1.690	0.091	†	2581
General Retail	Family	-2.240	0.025	*	2581
General Services	Family	2.617	0.009	**	2581
Variety Store	Family	-2.028	0.043	*	2581
Grocery Store	Family	-6.576	0.000	***	2581
Handicrafts	Family	2.519	0.012	*	2581
Professional Services	Family	1.467	0.143		2581
Seamstress Services	Family	2.836	0.005	**	2581

Legend: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, ***$p < 0.001$

Table 2.8: T-Statistics on Industry of Entrepreneur by Motivation

Industry	by	T-Stat	Pr> |t|		Observations
Taxi Services	Motivation	-1.668	0.095	†	2533
Bar/Snack Bar	Motivation	-1.526	0.127		2533
Beauty Salon	Motivation	1.861	0.063	†	2533
Confectioner	Motivation	0.884	0.377		2533
Contractor	Motivation	1.524	0.128		2533
Domestic Services	Motivation	4.944	0.000	***	2533
Education/Classes	Motivation	-1.790	0.074	†	2533
General Retail	Motivation	-2.066	0.039	*	2533
General Services	Motivation	-2.150	0.032	*	2533
Variety Store	Motivation	-1.021	0.308		2533
Grocery Store	Motivation	0.653	0.514		2533
Handicrafts	Motivation	-1.587	0.113		2533
Professional Services	Motivation	-0.539	0.590		2533
Seamstress Services	Motivation	-0.621	0.535		2533

Legend: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, ***$p < 0.001$

CHAPTER 3:

Venturing Outside: Which Entrepreneurs Cross Institutional Boundaries?

INTRODUCTION

Entrepreneurship has been viewed as a promising and long-lasting solution to poverty (Bruton, 2010; Bruton, Ketchen, & Ireland, 2013). Entrepreneurs in impoverished settings, market places characterized by high institutional voids (London & Hart, 2011; Prahalad, 2005), largely operate outside of government oversight and regulation or in other words in the informal economy (Godfrey & Dyer, 2015). Entrepreneurs operating in the informal economy are limited in their capacity to elevate themselves out of poverty due to their inability to draw on formal institutions that facilitate and support the accumulation of resources and growth (McMullen, 2011). Instead, entrepreneurs tend to rely on informal institutions and mechanisms (e.g., norms, values, reciprocity, social ties, etc.) to govern economic activity (Godfrey, 2011, 2015; Webb, Tihanyi, Ireland, & Sirmon, 2009a). Informal institutions may provide structure and regulation to the informal economy but do not generally act as efficient substitutes for formal institutions (e.g., enforceable property rights) as the entrepreneur's business transitions from a micro-organization that supports subsistence towards a business that generates surplus income and growth (Mair & Marti, 2009; Sutter, Webb, Kistruck, & Bailey, 2013).

Impoverished settings represent an informal institutional environment as economic activity is largely governed by informal institutions in the presence of significant institutional voids – "situations where institutional arrangements that support markets are absent, weak, or fail to accomplish the role expected of them" (Mair & Marti, 2009: 419). The institutional boundaries between formal and informal institutional environments are often clearly distinguishable. For example, in many emerging economies urban slums, an informal institutional environment, represent a stark contrast to more formal institutional environments and are scattered throughout metropolitan areas (Gras & Nason, 2015) (refer to figure 1.4). Unfortunately, impoverished settings are prevalent around the world and may be increasing in number and size. Recent estimates suggest that there are over 200,000 slums across the world containing over one billion people (Davis, 2006) and that number is expected to double to over two billion by the year 2030 (UN-HABITAT, 2003).

Research on the informal economy has a long tradition of examining the rise of the informal economy and marginalized communities (Castells & Portes, 1989; Dau & Cuervo-Cazurra, 2014; De Soto, 1989, 2000; La Porta & Schleifer, 2008). However, less research has examined what factors influence an entrepreneur's transition out of such communities (Bruton *et al*., 2013). A fundamental assumption or argument in much of the extant research suggests that the solution to the informal economy and poverty resides in institutional reform that transforms or strengthens weak institutions into well-functioning and inclusive institutions. However, Godfrey (2011) notes that: "the easily invoked (but fundamentally incorrect) notion of weak institutions provides an overly simplistic solution to a complex problem. In reality, the institutions supporting and sustaining *the informal economy* and poverty prove remarkably robust, strong, and able to resist change and reform" (Godfrey, 2011: 266; Mair, Marti, & Ventresca, 2012). Similarly, research on institutional change and entrepreneurship suggests that regulatory reform may lead to unsatisfactory or even unanticipated consequences because of its interaction with cognitive and normative institutions (informal institutions) (De Castro, Khavul, & Bruton, 2014; Eberhart, Eesley, & Eisenhardt, 2015; Eesley, Hsu, & Roberts, 2014; Sine & David, 2010). As an illustration of this point, many emerging economies have exhibited high levels of entrepreneurial activity and have improved the quality of their formal institutions but such entrepreneurial activity and institutional reform have not lead to significant improvement in overall poverty levels (Bruton *et al*., 2013; World Resources Institute, 2007). This reality, points toward the need for more research that examines the interaction between formal and informal institutions on entrepreneurship (Eberhart, Eesley, Cheng, & Skousen, 2015; Hiatt, Sine, & Tolbert, 2009; Peredo & McLean, 2013) and the boundaries between the formal and informal economy (Webb, Ireland, & Ketchen, 2014; Webb, *et al*., 2009a).

The interaction between formal and informal institutional environments leads to institutional pluralism, which results in competing pressures and conflicts between normative and regulatory expectations (Kraatz & Block, 2008, Webb, *et al*., 2009a). This friction in competing institutions influences the entrepreneur's decision to exit the informal economy (Skousen & Mahoney, 2015). Yet, what remains unexamined is our understanding of the antecedents that influence whether or not entrepreneurs who are operating in informal institutional environments will venture outside their informal institutional environment by crossing institutional boundaries into more formal institutional environments. Crossing institutional boundaries influences the entrepreneur's ability to identify, evaluate, and exploit entrepreneurial opportunities which has important implications for transitioning out of poverty (Bruton *et al*., 2013; Ketchen, Ireland, & Webb, 2014). However, as entrepreneurs cross institutional boundaries into a more formal institutional environment they encounter institutional pluralism or a different set of institutionalized rules, norms, and expectations about business practices which may lead to an entrepreneur's reluctance to cross institutional boundaries (Kraatz & Block, 2008; Pache & Santos, 2010). Furthermore, crossing institutional boundaries leads to greater visibility by and oversight from the government thereby increasing the pressure for the entrepreneur to exit the informal economy and enter the formal economy by complying with government regulation (e.g., registration requirements) (De Castro *et al*., 2014; DiMaggio & Powell, 1983; Webb *et al*., 2009a). Thus, the inherent paradox, crossing institutional boundaries offers many potential benefits to the entrepreneur yet introduces significant challenges that can lead to the entrepreneur's business being delegitimized or even shut down.

The purpose of this chapter is to examine the factors that influence whether an entrepreneur who operates in an informal institutional environment (represented by quadrants 1 and 2 in figure 1.1) crosses into a formal institutional environment. This study distinguishes between crossing institutional boundaries for clients and suppliers; and proposes that crossing institutional boundaries for suppliers relative to clients may introduce greater friction between competing institutions. Specifically, this study examines how the entrepreneur's motivation for starting a business and level of education can influence whether the entrepreneur crosses institutional boundaries for clients and suppliers. It then examines how operating as a family business may also be associated with crossing institutional boundaries.

The data used in this study derive from a community survey that was administered door by door by a third party on behalf of the state government of Rio de Janeiro to assist in identifying and evaluating the entire population of entrepreneurs in the urban slum of Manguinhos in Rio de Janeiro, Brazil. Large and representative datasets are uncommon in informal economy research due to limitations on identifying and accessing entrepreneurs that operate informally and in underdeveloped institutional environments (Bruton, 2010; Bruton *et al*., 2013). Consequently, empirical findings in such settings "remain tentative because they derive from only a small number of surveys and relatively small samples" (Williams & Nadin, 2010: 371). As such, this study provides a unique and rich understanding of an important and understudied context and avoids potential biases in sample selection which is difficult to minimize in informal economy research because entrepreneurs operating informally may be unwilling to acknowledge that they are operating illegally (Bruton, Ireland, & Ketchen, 2012; Godfrey, 2011; London & Hart, 2011; McGahan, 2012).

This study makes several contributions to the literature on the informal economy (Godfrey, 2015; 2011; Webb *et al*., 2013, Webb *et al*., 2009a), entrepreneurship in underdeveloped contexts (Bruton *et al*., 2013; London & Hart, 2011; Prahalad, 2005), and institutions and entrepreneurship (Sine & David, 2010). First, this study provides unprecedented insight into the mobility of entrepreneurs in informal institutional environments and to understanding who is more likely to interact with incongruent institutions by crossing institutional boundaries. Second, it does so by theoretically differentiating between crossing intuitional boundaries for clients and suppliers. Although prior work has emphasized the interaction of institutions (e.g., Sine & David, 2010; Webb *et al*., 2009a), this study is one of the first to emphasize that the interaction of institutions may have different antecedents depending on whether that interaction occurs in upstream (suppliers) or down-stream (clients) economic activity (Skousen & Mahoney, 2015). Third, this study builds upon on institutional theory but also draws on other theoretical perspectives beyond institutional theory, which has been the predominate perspective used to examine the informal economy (Ketchen, Ireland, & Webb, 2014).

In the following sections specific hypotheses are developed on the factors that influence crossing institutional boundaries and then empirically examined using ordered logit and logistic regression analyses while controlling for a variety of variables across different levels of analysis and performing additional robustness checks. The study concludes with a discussion of the empirical results, implications for current theory and policymakers, and potential avenues for future management research.

THEORY AND HYPOTHESIS DEVELOPMENT

Institutional Environments

Institutions establish "the rules of the game" and thereby define what is acceptable within a society (North, 1990: 3). Institutions can be broadly classified into formal and informal institutions (North, 1990). Formal institutions are regulations and laws that are codified and enforced, often by the state, establishing the boundaries of what is legal (Suchman, Steward, & Westfall, 2001). More recently, formal institutions have been conceptualized broadly to include supporting apparatuses such as capital/labor markets, education, health care, utilities, and infrastructure (Khanna & Palepu, 1997; Mair & Marti, 2009). In contrast, informal institutions are beliefs, values and norms that establish what are socially accepted and expected patterns of behavior (Aldrich & Baker, 2001). The combination of formal and informal institutions within a well-defined space (e.g., country, region, city, community, group, etc.) creates an institutional environment that leads to an institutional logic where there is shared meaning that provides coherence to social life and expectations about social behavior (Misangyi, Weaver, & Elms, 2008; Scott, 2008; Thornton & Ocasio, 1999; Thornton, Ocasio, & Lounsbury, 2012). Institutional environments vary in their support for entrepreneurial activity and specific types of entrepreneurship (Terjesen, Hessels, & Li, 2013). Formal and informal institutions may converge or diverge in their support (or lack of support) for entrepreneurial activity leading to different types of entrepreneurship (Eberhart, Eesley, Cheng, & Skousen, 2015). One notable outcome of when formal and informal institutions diverge is informal business (Webb, *et al*., 2009a) particularly in the context of entrepreneurship in impoverished settings (Bruton *et al*., 2013). Such cases represent situations where informal institutions are largely supportive of entrepreneurial activity but formal institutions either consider such activity illegal and/or do not provide adequate support or access to resources that facilitate growth due to weak or insecure institutions (low quality) or incomplete or absent institutions (institutional voids) (Godfrey, 2011). As a consequence, entrepreneurship in areas that are high in institutional voids often occurs in institutional environments that can be classified as informal institutional environments. Informal institutional environments are defined as institutional environments (the combination of formal and informal institutions within a well-defined space) where economic activity is largely governed by informal institutions that are supportive of the informal economy and consider informal economic activity as an acceptable or legitimate form of economic activity and where formal institutions are relatively absent (i.e., high institutional voids). On the other hand formal institutional environments are institutional environments where economic activity is largely governed by informal institutions that are not supportive of the informal economy and consider informal economic activity as an unacceptable or illegitimate form of economic activity and where formal institutions are influential and well-functioning.

Interaction at Different Points in the Value Chain

Entrepreneurs operating in informal institutional environments may interact with more formal institutional environments at any stage in the entrepreneurship process and throughout their value chain activities (Chen, 2007; De Castro *et al*., 2014). The interaction between institutional environments is a situation that researchers refer to as *institutional pluralism* (Friedland & Alford, 1991; Kraatz & Block, 2008; Pache & Santos, 2010). Confronting and managing institutional pluralism may create significant challenges for entrepreneurs (Fisher, Kotha, & Lahiri, *forthcoming*), particularly for unregistered (informal) entrepreneurs operating in formal institutional environments as they lack both legal and normative thresholds for legitimacy. However, the interaction between institutional environments may produce greater friction and challenges to the entrepreneur if the interaction occurs in upstream (suppliers) relative to downstream (clients) economic activity (Skousen & Mahoney, 2015). As entrepreneurs cross institutional boundaries to sell their products to clients they increase their visibility to government agencies (formal institutions) that consider such activity as illegal. As a consequence it is difficult for unregistered entrepreneurs to openly market their products. Furthermore, clients may consider through normative institutions that such businesses are illegitimate and may refuse to purchase the entrepreneur's goods and services. However, entrepreneurs that cross institutional boundaries for suppliers may be subjected to greater transactional hazards and weak bargaining positions relative to those associated with interacting with clients.

As entrepreneurs interact with suppliers from a more formal institutional environment informal institutions may be less effective in correcting transactions that did not comply with ex ante or ex post expectations or institutional logics (Khavul, Chavez, & Bruton, 2013; Kistruck, Beamish, Qureshi, & Sutter, 2013). As such, suppliers in more formal institutional environments may be less willing to establish a deep relationship (e.g., establishing credit) with entrepreneurs from informal institutional environments. Consequently, entrepreneurs based in informal institutional environments may subject themselves to the costs associated with small numbers bargaining leading to strategic vulnerability as the supplier can engage in opportunistic pricing and other opportunistic behavior (Kistruck, Webb, Sutter, & Ireland, 2011). Furthermore, Chen (2007) notes that transactions that occur outside of government oversight tend to be governed by the firm with a stronger bargaining position, which tends to be the more formal firm. This phenomenon places entrepreneurs from informal institutional environments in a weaker bargaining position and subject to substantial transaction cost hazards, which may take the form of enforcement, monitoring, negotiation and searching costs to manage and/or correct transactions with suppliers (Kistruck, *et al*., 2013).

Taken together these findings illustrate the importance of distinguishing between crossing institutional boundaries for clients vs. suppliers as the mechanisms that lead to friction between competing institutions may be different for clients and suppliers and be associated with different factors. The remainder of this chapter examines the antecedents or factors that influence whether or not entrepreneurs who are operating in informal institutional environments will cross institutional boundaries into more formal institutional environments.

Factors that Influence Crossing Institutional Boundaries

Start-up Motivation

To understand entrepreneurial behavior and outcomes it is critical to understand the entrepreneur's motivation underpinning entrepreneurial action. In informal institutional environments research suggests or largely assumes that entrepreneurs start their business out of economic necessity to sustain life (Holmén, Min, & Saarelainen, 2011; London & Hart, 2011). While, the majority of entrepreneurs are motivated out of necessity, as outlined in chapter 2, surprisingly entrepreneurial motivations for starting a business in informal institutional environments are quite heterogeneous in nature and can lead to different entrepreneurial outcomes. Entrepreneurship research on motivation has shown that the reason for starting a business highly influences entrepreneurial action (Hessels, van Gelderen, & Thurik, 2008; Shane, Locke, & Collins, 2003; Stephan, Hart, & Drews, 2015; Stoner & Fry, 1982). Consistent with prior research on entrepreneurial motivation, motivations for starting a business can be distinguished between opportunity and necessity motivations, also referred to as push and pull factors (Kirkwood, 2009; Schjoedt & Shaver, 2007). Push factors refer to the conflict between one's current and one's desired occupational status that may push an individual into starting a business (necessity-based entrepreneurship) when other alternatives to achieve an individual's desired outcomes are unavailable. Common examples of push factors include unemployment and dissatisfaction with current employment. Pull factors refer to the entrepreneur's expectation of potential awards and being better off by starting a business (opportunity-based entrepreneurship). Examples of pull factors include autonomy, independence, need for control, and social status (Amit & Muller, 1995; Bhola, Verheul, Thurik, & Grilo, 2006; Uhlaner & Thurik, 2007).

Research on push and pull factors indicate entrepreneurs motivated by pull factors are associated with higher growth ambitions, risk tolerance, confidence to overcome obstacles, and a lower fear of failure compared to entrepreneurs driven by push factors (Bhola *et al.*, 2006; Morris, Miyasaki, Watters, & Coombes. 2006). Consequently, entrepreneurs motivated by pull factors tend to be financially more successful than entrepreneurs motivated by push factors (Amit & Muller, 1995). However, recent research suggests that some opportunity-motivated entrepreneurs may share some similar motivations as necessity-driven entrepreneurs such as a desire to maintain and even to increase income (Hessels *et al*., 2008). Thus, recent studies have begun to distinguish a subset of opportunity-motivated entrepreneurs into improvement-driven entrepreneurs who seek to increase their independence and autonomy, or their personal income (yet are not motivated by a high degree of wealth/money) but are not pushed into entrepreneurship or considered to be necessity-based entrepreneurs (Bosma, Wennekers, & Amoros, 2011; Stephan *et al*., 2015).

Taken together, research on entrepreneurial motivation suggests that opportunity-driven entrepreneurs, including improvement-driven entrepreneurs, may be more likely to cross from informal institutional environments into more formal institutional environments as they are more confident in overcoming obstacles, more likely to seek productivity and efficiency gains, and have higher growth ambitions compared to necessity based entrepreneurs. As more formal institutional environments provide entrepreneurs with better access to benefits from formal institutions and broader market opportunities, entrepreneurs driven by pull factors are expected to be more likely to cross institutional boundaries.

Hypothesis 1a: *Opportunity-driven entrepreneurs are positively associated with crossing institutional boundaries for clients.*

Hypothesis 1b: *Opportunity-driven entrepreneurs are positively associated with crossing institutional boundaries for suppliers.*

Hypothesis 2a: *Improvement-driven entrepreneurs are positively associated with crossing institutional boundaries for clients.*

Hypothesis 2b: *Improvement driven entrepreneurs are positively associated with crossing institutional boundaries for suppliers.*

Human Capital

As entrepreneurs in informal institutional environments cross into more formal institutional environments they encounter institutional pluralism and competing pressures between formal and informal institutions (De Castro *et al.*, 2014; Friedland & Alford, 1991; Kraatz & Block, 2008; Pache & Santos, 2010). Institutional pluralism creates significant challenges for the entrepreneur as institutional logics represent distinct social worlds that may not be compatible (Fisher *et al.*, *Forthcoming*) and as the effectiveness of informal institutions as substitutes for formal institutions in informal institutional environments may be less effective in more formal environments or even at odds with expectations (Godfrey, 2015). Furthermore, crossing institutional boundaries may lead to greater levels of institutional ambiguity between legal rules and enforcement capabilities by government agencies as government agencies do not always consistently or fairly apply or enforce the law (Godfrey, 2011; Skousen & Mahoney, 2015).

An entrepreneur's willingness to engage with competing institutions and ability to understand and adapt to competing pressures influences the entrepreneur's capacity to grow their business and transition out of the informal economy and also poverty. In impoverished settings, human capital has been shown to be a salient predictor of an entrepreneur's willingness to engage with surroundings, to search for new products or vendors, and transact with unfamiliar exchange partners (Kintgen, Kroll, & Rose, 1988; London, Esper, Grogan-Kaylor, & Kistruck, 2014; Rosa & Viswanathan, 2007). These findings suggest that entrepreneurs with higher levels of human capital in informal institutional environments will not only have greater capacity to understand competing institutional pressures but also greater willingness to engage with them via crossing institutional boundaries.

Human capital refers to "the skills and knowledge that individuals acquire through investment in schooling, on-the-job training, and other types of experience" (Unger, Rauch, Frese, & Rosenbusch, 2011: 343). Human capital theory (e.g., Becker, 1962, 1964; Schultz, 1961) suggests that entrepreneurs who have a greater stock of knowledge will have greater cognitive ability which will lead to more productive and efficient activity (Block & Sandner, 2009). As such, individuals with higher levels of human capital are generally associated with higher levels of legitimacy and respect. While the concept of human capital is multi-dimensional in nature, this study focuses on the entrepreneur's education level as a key measure of human capital, which has been shown to be positively related to entrepreneurial performance (Murphy, Shleifer, & Vishny, 1991) and sense making of the institutional environment (De Castro *et al.*, 2014). Hence, it is expected that entrepreneurs with higher levels of education will be more likely to cross institutional boundaries as they should have greater capacity to understand incongruent institutions and the ability to confront and manage the challenges associated with institutional pluralism.

Hypothesis 3a: *As the entrepreneur's level of education increases, the entrepreneur is more likely to cross institutional boundaries for clients.*

Hypothesis 3b: *As the entrepreneur's level of education increases, the entrepreneur is more likely to cross institutional boundaries for suppliers.*

Family Business

Family business is a common form of ownership in informal institutional environments (Gras, & Nason, 2015) where entrepreneurs have to mitigate high levels of institutional voids (Anderson, Markides & Kupp, 2010; Mair & Marti, 2009). Families provide a unique source of resources, including both human and financial capital, which may increase the family business' ability to survive and compete in institutional environments that lack well-functioning formal institutions (Dyer & Mortenson, 2005; Sirmon & Hitt, 2003). Family relationships represent a collective identity of an institutionalized group which in turn can influence and shape behavior to be consistent with family expectations and logics (Thornton & Ocasio, 2008) and create higher levels of trust (Zahra, Hayton, & Salvato, 2004). Frequent association and emotional closeness among family members creates shared values and a sense of responsibility to the group (Miller, Breton-Miller, & Lester, 2010; Schulze, Lubatkin, Dino, & Buchholtz, 2001).

These attributes of family businesses lead to less reliance on formal institutions for resources (Khavul, Bruton, & Wood, 2009) and as a control mechanism (Schulze, *et al*., 2001). Rather, family businesses tend to rely more heavily on their social ties within their immediate and extended families and within their local communities (Khavul *et al*., 2009). Family businesses have the advantage of implicit contracting that can be enforced through informal control mechanisms such as creating a culture of compliance or clan like behavior to reduce agency and monitoring costs (Daily & Dollinger, 1991; Kotey, 2005; Schulze, *et al*., 2001). These advantages may be even more pronounced in informal institutional environments where informal institutions govern economic activity and the boundaries between firm and family are often more inextricably linked (Aldrich & Cliff, 2003; Gras, & Nason, 2015).

Taken together, these attributes of family businesses suggest that family businesses are less likely to cross institutional boundaries as family businesses are more strongly embedded in their social ties and societal logics within their local communities (Thornton, 2004). Furthermore family businesses tend to rely less on formal institutions as a control mechanism and have greater access to alternative resources in informal institutional environments.

Hypothesis 4a: *Family businesses are negatively associated with crossing institutional boundaries for clients.*

Hypothesis 4b: *Family businesses are negatively associated with crossing institutional boundaries for suppliers.*

DATA AND METHODS

Data

The data used in this study derive from a community survey of entrepreneurs in the urban slum of Manguinhos in Rio de Janeiro, Brazil. Ordered logit and logistic regression analyses were used to examine the entrepreneur's behavior of crossing institutional boundaries. The survey data provide an appropriate setting to empirically evaluate the hypotheses developed in this study as the data provide the location of the entrepreneur's clients and suppliers. The survey was performed by a third party administrator on behalf of the state government of Rio de Janeiro to assist in identifying and evaluating the entire population of entrepreneurs in the community. The survey was administered door by door by trained employees during the period July 2008 to April 2009. A total of 2,833 entrepreneurs were identified. Of this total, 57 refused to participate in the survey and 61 were unable to be contacted. For those entrepreneurs that were unable to be contacted, survey administrators made an attempt to visit them on three different occasions on different days and times in an effort to have them participate in the survey. The total number of entrepreneurs that completed the survey was 2,715 representing 95.8% of the total population of entrepreneurs identified. The responses were analyzed and subsequently verified in the field on approximately 20% of the respondents to ensure validity. For purposes of this study, businesses that were associated with the government or operated as a not-for-profit (a total of 98 businesses) were excluded from this study resulting in an available sample size of 2,617. After removing missing responses for the variables of interest, the total sample size was 2,009 businesses.

Variables

Dependent Variable. The dependent variables in this study are ordinal measures for crossing institutional boundaries and are based on whether the entrepreneur crossed institutional boundaries to exchange goods and services with *clients* and *suppliers*. The location of *clients* and *suppliers* was set to "1" if they were located within Manguinhos, in adjacent neighborhoods outside of Manguinhos to “2,” and in the city outside of adjacent neighborhoods or outside of the city limits of Rio de Janeiro to “3”. The use of an ordinal measure of crossing institutional boundaries is conceptually accurate. Manguinhos is surrounded by adjacent neighborhoods (e.g., Benfica, Bonsucesso, Higienopolis, Jacarezinho) that are less developed compared to other more affluent neighborhoods in Rio de Janeiro (e.g., Zona Sul, City Center, etc.), which justifies the use of a continuous measure of crossing institutional boundaries.

Explanatory Variables. *Motivation* was measured based on the entrepreneur’s response to the question, “why did you start the business?” Consistent with prior literature on entrepreneurial motivation, this study distinguishes between opportunity-driven, improvement-driven, and necessity-based entrepreneurship. Dummy variables were created for each group. *Opportunity-driven* entrepreneurs were set to “1” if the motivation for starting the business was because the opportunity emerged. *Improvement-driven* entrepreneurs were set to “1” if the entrepreneur started the business to achieve greater independence/autonomy or to increase income but not out of necessity. *Necessity-based* entrepreneurs serve as the reference group and were coded as “1” if the entrepreneur started the business because they were unemployed or other necessity-based reason listed by the entrepreneur. *Education* was measured as a continuous variable based on the level of formal education obtained, ranging from “1” (no formal schooling) to “8” (attended university). *Family* business was measured based on the entrepreneur’s response to the question, “is your business considered a family business, non-family, or mixed?” Businesses that operated as a family business were coded as “1” and set to “0” if otherwise.

Control Variables. A number of control variables spanning different levels of analysis were included in the regression analyses that could potentially influence whether the entrepreneur crosses institutional boundaries. At the individual-level, this study controls for the entrepreneur's *gender* and *age*. *Gender* differences are examined by creating a binary variable set to "1" for male and "0" for female. The entrepreneur's *age* was coded as a continuous variable in number of years. Firm- and community-level control variables were included to proxy for the visibility of the firm by law enforcement/government agencies and the size of the firm. The first measure, *area,* identifies the location of the business within Manguinhos and was coded based on the four geographic areas within Manguinhos that the government uses to manage government programs. Each area within Manguinhos varies based on its level of economic development and accessibility. The area that was identified as having the greatest number of entrepreneurs was coded as "1" and the other areas were set to "0". The second measure of visibility, *formal*, was measured based on whether or not the entrepreneur's business was registered with the government and was measured based on the entrepreneur's response to the question, "is your business formal or informal?" The third measure, *oversight*, was measured based on the entrepreneur's response to the question, "what is the level of difficulty you have with government regulation and oversight?" Responses ranged on a scale from "High" to "Not Applicable." Responses were coded on a 4-point scale where High = "3", Medium = "2", Low = "1" and Not Applicable = "0". Responses for those entrepreneurs that responded "Did Not Know" were coded as "0". Fourth, firms operating in a storefront property, s*torefront*, were coded as "1" if the entrepreneur operated in either an owned or rented storefront property and set to "0" if otherwise (e.g., street cart, in the home, door to door sales, etc.). To a certain degree, this measure also controls for the firm's size as entrepreneurs that have garnered enough resources to operate in a storefront property tend to be bigger and more financially successful. To further control for firm size a control variable was created for firms that had *employees*. Firms with employees were set to "1" and "0" if otherwise.

Several measures of institutional voids were created that measure the degree of difficulty that entrepreneurs encounter as a consequence of institutional voids. Such voids may influence whether an entrepreneur crosses institutional boundaries. Each measure of institutional voids is based on the entrepreneur's response to the question of what is the level of difficulty the entrepreneur has with a specific institutional void. Responses ranged on a scale from "High" to "Not Applicable". Responses were coded on a 4-point scale where High = "3," Medium = "2," Low = "1" and Not Applicable = "0". Responses for those entrepreneurs that responded "Did Not Know" were coded as "0".

Finance voids represent the absence or lack of quality financial markets. This study focuses on the ability of the entrepreneur to access credit. This measure is captured by the entrepreneur's response to the question, "what is the level of difficulty to access credit?" *Infrastructure* voids represent the absence or lack of quality public infrastructure. The entrepreneur was asked a separate question for the level of difficulty with each of the following types of infrastructure: electricity, water and telecommunication. An aggregate score was created by combing each response to measure the overall difficulty with infrastructure voids. *Labor* voids represent the absence of skilled labor in the community. This measure is captured by the entrepreneur's response to the question, "what is the level of difficulty to find skilled/qualified labor in the community?" *Market* voids represent the absence of well-functioning exchange markets. This study focuses on the general market conditions of the entrepreneur's customers. This measure is captured by the entrepreneur's response to the questions, "what is the level of difficulty with the economic conditions of clients?" and "what is the level of difficulty of having few customers?" An aggregate score was created combing each response to measure the overall difficulty with market voids. These measures for institutional voids represent indicators of community-specific institutional conditions. They are measured at the firm-level yet represent the firm's perceptions of the institutional environment of the community in which they operate.

Finally, this study controls for the firm's *industry* which was categorized into 11 different industries based on the products or services sold by the firm.

RESULTS

Table 3.1 displays descriptive statistics and a correlation matrix for the variables. Due to high levels of multicollinerity between measures for institutional voids, empirical estimations were run independently using each measure. Only finance voids were statistically significant and used in subsequent models. The ordered logit and logistic regression results are summarized in Table 3.2. Model 1 (2) empirically examines crossing institutional boundaries for *clients* (*suppliers*) using ordered logit. The two models each had a total sample size of 2009 entrepreneurs with Pseudo R2 of 0.21 and 0.10, respectively. Overall, the results suggest that the proposed relationships in this study are highly influenced by whether the entrepreneur crossed institutional boundaries for *clients* compared to *suppliers*.

Hypotheses 1a,1b and 2a, 2b predicted that opportunity and improvement-driven motivation were positively associated with crossing institutional boundaries for clients and suppliers. As shown in model 1, the coefficients for opportunity and improvement-driven motivation were not significant whereas improvement-driven motivation was both positive and significant ($p < .05$) in model 2. Thus hypothesis 2b was supported while hypotheses 1a, 1b, and 2a were not supported. Hypotheses 3a and 3b suggested that education would be positively associated with crossing institutional boundaries for clients and suppliers. In model 1 the coefficient for education was not significant whereas in model 2 the coefficient for education is both positive and significant ($p<.10$). These results provide support for hypothesis 3b but do not support hypothesis 3a. Lastly, Hypotheses 4a and 4b suggested that family businesses would be negatively associated with crossing institutional boundaries for clients and suppliers. Contrary to expected, model 1 and model 2 found significant results but opposite in sign. The coefficient in model 1 for *family* is negative and significant ($p<.001$), providing support for hypothesis 4a. In model 2 the coefficient is positive and significant ($p<.001$) which does not support hypothesis 4b.

To test the robustness of the results alternative coding was performed for crossing institutional boundaries for *client* and *suppliers* in an effort to verify whether the results are sensitive to how institutional boundaries are coded. Rather than code crossing institutional boundaries as an ordinal measure, the variable was recoded as a dichotomous measure and new model estimations were performed using logistic regression and results are provided in models 3 and 4 of Table 3.2. Manguinhos is surrounded by adjacent neighborhoods (e.g., Benfica, Bonsucesso, Higienopolis, Jacarezinho) that are less developed compared to other more affluent neighborhoods in Rio de Janeiro (e.g., Zona Sul, City Center, etc.). As such, the institutional boundaries between adjacent neighborhoods and Manguinhos may be weak or insignificant which justifies the use of a dichotomous measure of crossing institutional boundaries.

In models 3 and 4 of Table 3.2 entrepreneurs who had clients or suppliers outside of Manguinhos and adjacent neighborhoods were set to "1" and those cases where the entrepreneur had clients or suppliers inside of Manguinhos and adjacent neighborhoods were coded as "0". Similar to the ordered logit results for hypotheses 1a, 1b and 2a, 2b only the coefficient for improvement-driven entrepreneurship for suppliers was found to be significant in model 4 ($p < .001$), which suggests that entrepreneurs who are improvement-driven are more likely to cross institutional boundaries for suppliers. Hypothesis 3a and 3b suggested that crossing institutional boundaries would be positively associated with education. As shown in models 3 and 4, the coefficients were both positive and statistically significant at $p<.10$. These findings suggest that crossing institutional boundaries beyond adjacent neighborhoods for either clients or suppliers is associated with the entrepreneur's level of education. Hypothesis 4a and 4b suggested that family businesses would be negatively associated with crossing institutional boundaries. The coefficient for family in models 3 and 4 found no relationship. Considering these findings in relation to models 1 and 2 suggest that family businesses are more likely to cross institutional boundaries for suppliers in adjacent neighborhoods surrounding Manguinhos, which are more similar to their institutional environment, but are not more likely to go beyond.

As a further robustness check the models were estimated on a second urban slum called Rocinha. Rocinha is located in a different region of Rio de Janeiro. Geographically, Rocinha is isolated from the rest of the city and is only accessible through the highly affluent neighborhoods of Sao Conrado and Gavea. As such, an ordinal measure of crossing institutional boundaries is conceptually inaccurate as crossing into adjacent neighborhoods represents a stark contrast in institutional environments. Therefore *clients* and *suppliers* were set to "1" if the entrepreneur's clients or suppliers were outside of Rocinha and set to "0" if they were located in Rocinha. Logistic regression results (Clients: N=1925, Pseudo R^2= 0.28; Suppliers: N=1925, Pseudo R^2= 0.20) were generally consistent with the logistic regression results for Manguinhos (Models 3 and 4). Crossing institutional boundaries for clients had no statistically significant relationship with the independent variables except for opportunity-driven, which was marginally significant ($p<.10$) and negative. Whereas crossing institutional boundaries for suppliers was statistically associated with all the independent variables in the hypothesized directions. The coefficients for opportunity-driven and improvement-driven motivations were both positive and statistically significant (p<.001). The coefficient for *education* was positive and statistically significant at p<.05. The coefficient for *family* was negative and statistically significant at p<.001, suggesting that family businesses are less likely to cross institutional boundaries for suppliers. Overall, the additional analyses provide further support for the relationships identified in this study. A summary of the results are provided in Table 5.2.

As final robustness check entrepreneurs that were legally registered were removed from the sample and both the ordered logit and logistic regression models were re-estimated. Entrepreneur's that are registered with the government should not encounter the same normative friction in crossing institutional boundaries compared to unregistered entrepreneurs. Results from the new estimations were consistent with previous models providing further support for the relationships identified in this study.

DISCUSSION

The purpose of this study was to examine whether entrepreneurs in informal institutional environments cross into formal institutional boundaries. The findings provide unique insight into the mobility of entrepreneurs in impoverished settings and have important implications for scholars and policymakers interested in institutions, poverty and informal economy research (Bruton, *et al*., 2013). This study makes a contribution to the informal economy (Godfrey, 2011, 2015; Webb *et al*., 2009a) and institutions and entrepreneurship literature (Sine & David, 2010) by developing theory to better explain and predict who may interact with competing institutions and for what reason (clients vs. suppliers). Although prior work has emphasized the interaction of institutions, this study extends prior research by examining antecedents that may influence an entrepreneur's decision to interact with competing institutions across different points in the value chain. Empirical findings indicate that explanatory variables that predict whether entrepreneurs cross institutional boundaries have quite different and in some cases opposite effects based on whether crossing institutional boundaries was to interact with clients versus suppliers. These findings point to the increased need for understanding the interaction of institutions at different points in the value chain as they may have different effects on the entrepreneur's willingness and ability to interact with other institutional environments.

The empirical findings for motivation indicate that the motivation for starting a business is strongly associated with crossing institutional boundaries for suppliers but not for clients. As hypothesized a positive and significant affect is found for improvement-driven entrepreneurs across all models. Yet, opportunity-based entrepreneurs was only found to be positive and significant for suppliers in Rocinha, offering partial support for opportunity-based entrepreneurs being more likely to cross institutional boundaries for suppliers. Interestingly results indicate that opportunity-driven entrepreneurship tends to be negatively associated with crossing institutional boundaries for clients. However, it is only statistically significant for Rocinha at $p<.10$. This finding suggests that opportunity-driven entrepreneurs may have a tendency to identify and exploit opportunities that are centric to customers embedded in their communities. Future research would benefit from examining the relationship between motivation and opportunity identification in the context of informal institutional environments.

Turning to the results for education, results for all models associated with suppliers find a statistically significant and positive result whereas only model 3 for clients is positive and statistically significant. Overall, these findings further corroborate this study's argument that interacting with suppliers relative to with clients from more formal institutional environments introduces increased challenges as more educated entrepreneurs are more likely to cross institutional boundaries for suppliers.

Lastly, results on family business, results in models 1 and 2 (ordered logit) appear to be driven by crossing institutional boundaries into adjacent neighborhoods. Recall that in the case of Manguinhos, adjacent neighborhoods are still considered lower developed neighborhoods within Rio de Janeiro. To account for this reality, models 3 and 4 combined adjacent neighborhoods with Manguinhos. As shown in models 3 and 4 the coefficients for clients and suppliers were not statistically significant. These findings suggest that family businesses in Manguinhos are quite mobile within adjacent neighborhoods in their dealings with suppliers but tend to remain within their community to sell their goods and services. On the other hand in Rocinha results indicate that family businesses are less likely to cross institutional boundaries for suppliers. Taken together these findings suggest that family businesses are highly mobile within congruent institutional environments for suppliers but are less likely to go beyond as institutional boundaries become more incongruent.

From a policy perspective, several of the research findings are of relevance to policymakers, private agencies, and not-for-profits interested in the informal economy and poverty. Research on the informal economy suggests that crossing into more formal institutional environments is an important antecedent to transitioning out of the informal economy (Skousen & Mahoney, 2015). The overarching finding of this study suggests that entrepreneurs encounter significant challenges when interacting with suppliers, as entrepreneurs with higher level of education and other attributes associated with productive behavior are more likely to cross institutional boundaries. Increased interaction with suppliers from more formal institutional environments allows entrepreneurs to introduce a variety of products and services with potentially greater value to customers into impoverished settings where entrepreneurs largely employ bricolage techniques to recombine low value assets into something of value (Baker &

Nelson, 2005; Fisher, 2012). In many cases not-for-profit organizations and social entrepreneurs have made concerted efforts to provide entrepreneurship education, training services, and other resources to underserved populations. This phenomenon is gaining importance in management research and to policymakers yet much research remains to be done in order to understand the effectiveness of such organizations. Future research would benefit from examining how such organizations teach entrepreneurs to interact with incongruent institutions. As Godfrey (2011) notes institutions that support poverty are remarkably robust, and are not easily changed. Thus, providing entrepreneurs better access to formal institutions is important but not sufficient in helping entrepreneurs transition out of poverty. Future research should also consider whether certain efforts to change normative beliefs and values about entrepreneurial behavior is effective and in some cases even ethical depending on the nature of the normative belief (Godfrey, 2011). These are important questions that remain unresolved in the literature yet have important implications to reducing poverty and understanding entrepreneurship in impoverished settings.

Lastly, while the empirical results provide support for many of the hypotheses developed in this study, this research is not without limitations. While it is reasonable to assume that entrepreneurs that cross institutional boundaries will encounter different norms, values, and expectations about business practices and legal registration such differences are not explicitly measured in this study therefore limiting the ability to identify the precise mechanisms related to the explanatory variables that lead to a higher or lower likelihood of crossing institutional boundaries.

Conclusion

The informal economy remains understudied and misunderstood phenomenon, yet management scholars are well positioned to add value to this relatively new stream of research and help improve the standard of living of the billions of people who live in under-served conditions throughout the world. This study provided unique insight into the mobility of entrepreneurs in informal institutional environments by examining the likelihood that they would cross institutional boundaries into more formal institutional environments. This study maintains that management research would benefit from focusing on the strategic behavior of entrepreneurs in impoverished settings and in particular their interaction with formal and informal institutions outside of their communities. To guide future research, important research areas were also outlined that need further development to better understand how entrepreneurs navigate the entrepreneurship process in informal institutional environments and ultimately transition out of poverty.

TABLE 3.1: Descriptive Statistics and Correlations*

Variables	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Clients	1.36	0.58	1.00													
2. Suppliers	2.01	0.68	0.21	1.00												
3. Gender	0.43	0.50	0.04	0.10	1.00											
4. Opportunity Driven	0.06	0.23	0.03	0.06	0.09	1.00										
5. Improvement Driven	0.31	0.46	-0.00	0.08	0.02	-0.16	1.00									
6. Education	2.78	1.37	0.05	0.10	0.01	0.07	0.09	1.00								
7. Family Bus.	0.39	0.49	-0.20	0.12	0.10	-0.02	0.03	-0.02	1.00							
8. Age	41.82	13.08	0.01	0.01	0.08	0.04	0.09	-0.22	0.04	1.00						
9. Formal	0.04	0.19	0.16	0.12	0.10	0.21	0.04	0.18	0.06	0.04	1.00					
10. Area	0.55	0.50	0.12	-0.07	-0.16	0.03	-0.02	0.05	-0.42	0.03	-0.01	1.00				
11. Storefront	0.37	0.48	-0.16	0.18	0.27	0.12	0.07	0.10	0.28	0.06	0.15	-0.22	1.00			
12. Employees	0.28	0.45	-0.07	0.14	0.19	0.15	0.13	0.06	0.32	0.06	0.17	-0.04	0.34	1.00		
13. Oversight	1.35	1.15	-0.10	-0.02	0.02	-0.08	-0.13	0.02	0.23	-0.01	0.02	-0.13	0.10	-0.02	1.00	
14. Finance	1.54	1.09	-0.11	0.06	0.01	-0.06	-0.14	0.03	0.30	-0.02	-0.01	-0.20	0.15	0.01	0.69	1.00

* Industry dummies included in analysis but not presented

TABLE 3.2: Ordered Logit and Logistic Regression Results

	Model 1 Ordered Logit		Model 2 Ordered Logit		Model 3 Logit		Model 4 Logit		
	B	**(S.E.)**	**B**	**(S.E.)**	**B**	**(S.E.)**	**B**	**(S.E.)**	**Corresponding Hypotheses**
Dependent Variable:	**Clients**		**Suppliers**		**Clients**		**Suppliers**		
Independent Variables:									
Opportunity Driven	-0.12	(0.25)	0.23	(0.11)	-0.41	(0.61)	0.28	(0.27)	H1a, H1b
Improvement Driven	-0.19	(0.13)	0.25*	(0.11)	0.11	(0.33)	0.49***	(0.15)	H2a, H2b
Education	0.04	(0.04)	0.06†	(0.04)	0.18†	(0.10)	0.09†	(0.05)	H3a, H3b
Family Business	-0.57***	(0.15)	0.44***	(0.13)	0.14	(0.35)	-0.14	(0.16)	H4a, H4b
Control Variables:									
Gender	0.32*	(0.14)	0.17	(0.12)	0.23	(0.40)	0.35*	(0.16)	
Age	0.01*	(0.00)	-0.00	(0.00)	0.02†	(0.01)	-0.00	(0.01)	
Formal	1.72***	(0.29)	0.39	(0.29)	2.45***	(0.47)	0.50	(0.34)	
Clients	#	#	1.12***	(0.10)	#	#	2.35***	(0.34)	
Suppliers	1.06***	(0.11)	#	#	2.45***	(0.34)	#	#	
Area	0.12	(0.13)	-0.12	(0.11)	0.38	(0.33)	-0.05	(0.15)	
Storefront	-0.54***	(0.15)	0.73***	(0.12)	-0.17	(0.38)	0.62***	(0.16)	
Employees	-0.11	(0.15)	0.26*	(0.13)	0.17	(0.37)	0.79***	(0.16)	
Oversight	-0.12†	(0.07)	-0.22***	(0.06)	-0.22	(0.18)	-0.38***	(0.08)	
Finance	-0.16*	(0.07)	0.26***	(0.06)	-0.08	(0.19)	0.34***	(0.08)	
Industry:									
Taxi & Delivery	1.92***	(0.43)	-0.72†	(0.44)	1.83*	(0.88)	-0.39	(0.54)	
Bar / Restaurant	-1.47***	(0.27)	-1.18***	(0.22)	-1.34†	(0.81)	-1.18***	(0.27)	
Confectioner	-0.49†	(0.25)	-1.07***	(0.23)	-0.38	(0.89)	-1.82***	(0.37)	
Contractor	1.36***	(0.28)	-1.21***	(0.27)	1.65*	(0.69)	-1.31***	(0.38)	
Domestic Services	1.39***	(0.24)	-1.42***	(0.24)	0.81	(0.77)	-1.91***	(0.51)	
General Retail	0.42	(0.33)	-0.10	(0.33)	-0.44	(0.79)	0.16	(0.36)	
General Services	0.04	(0.22)	-0.89***	(0.21)	0.12	(0.62)	-0.89***	(0.26)	
Variety Store	-0.84*	(0.35)	-0.39	(0.29)	-0.23	(0.90)	-0.74*	(0.36)	
Groceries / Food	-0.90***	(0.28)	-0.75**	(0.24)	-2.41*	(1.22)	-1.07***	(0.31)	
Handicrafts	0.48†	(0.27)	0.18	(0.28)	0.63	(0.69)	0.18	(0.33)	
_cut 1	1.71	(0.33)	-1.32	(0.29)					
_cut 2	4.94	(0.36)	2.38	(0.30)					
_cons					-6.32***	(0.98)	-1.98***	(0.39)	
Model Significance									
McFadden's R2	0.21		0.10		0.35		0.19		
N=	2009		2009		2009		2009		

Legend: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, ***$p < 0.001$, # not included

CHAPTER 4:

Formality in Informality: Participating in the Formal Economy in Informal Institutional Environments

INTRODUCTION

Research in entrepreneurship in informal institutional environments characterized by high institutional voids and poverty is gaining importance in the management literature (Bruton, 2010; Khanna & Palepu, 1997; London & Hart, 2011; Prahalad, 2005). Current estimates suggest that nearly 2.5 billion people live in extreme poverty, based on an income of $2 or less a day (Bruton, Ketchen, & Ireland, 2013). Entrepreneurs in informal institutional environments largely operate outside of government oversight and regulation. In fact, much of the world economy operates outside of the purview of government influence. Research on the size of the informal economy suggests that the informal economy produces as high as 40 to 60% of gross domestic product in many emerging economies and as high as 10 to 20% in more developed economies (Schneider 2002, 2005; Webb, Bruton, Tihanyi, & Ireland, 2013). Management scholars have only recently turned their attention towards the study of the informal economy and recognized it as an important understudied phenomenon to which management scholars may contribute (Godfrey, 2015, 2011; McGahan, 2012).

The informal economy is defined as economic activity that takes place outside of government regulation and oversight and is best conceptualized as a continuum of the entrepreneur's level of compliance with the government as entrepreneurs may choose to comply with some forms of regulation (e.g., payment of taxes) and disregard others (e.g., the use of undocumented workers) (Godfrey, 2015; 2011). A common form of illegal activity, and the focus of this dissertation chapter, is the failure of entrepreneurs to register their business with the government which enables the government to track and oversee economic activity (De Castro, Khavul, & Bruton, 2014; Nichter & Goldmark, 2009).

Research on the informal economy has long explored the question of what prompts entrepreneurs and firms to register, and has been largely examined from an institutional or legalistic perspective (see review by Godfrey, 2011). The institutional perspective underscores that entrepreneurship is a socially constructed behavior conditioned by its social environment (Sine & David, 2010). This perspective posits that entrepreneurs are more likely to register when formal institutions facilitate registration through lower registration fees and less legal bureaucratic impediments, and offer higher levels of property rights protection and quality of services that benefit the entrepreneur (Dau & Cuervo-Cazurra, 2014; De Soto, 1989, 2000; La Porta & Schleifer, 2008; Marcouiller & Young, 1995; Nwabuzor, 2005; Webb *et al*., 2013; Zinnes, 2009). However, Godfrey (2011) notes that the institutional perspective tends to over-emphasize the role and quality of regulatory institutional frameworks and neglects cognitive and normative institutions (Scott, 2008), which include the beliefs, values, norms, and customs that impact the likelihood of registration. Recent qualitative studies support this view and illustrate that the principal barriers to registration may not be the direct financial costs or information search costs associated with registration (De Castro, *et al.*, 2014; De Mel, McKenzie, & Woodruff, 2013).

Recent research in the extant management literature on the informal economy has begun to incorporate cognitive and normative institutions, which can be joined within the broad category of informal institutions (North, 1990). Within this perspective, the informal economy is defined as those "economic activities that are outside of formal institutional boundaries (i.e., illegal) yet fall within informal institutional boundaries (i.e., legitimate)" (Webb *et al*., 2013: 3; Webb, Tihanyi, Ireland, & Sirmon, 2009a). This definition adds clarity to the context of the informal economy, which is often referred to as an unregulated market even though the informal economy may be highly regulated by informal institutions that confer legitimacy to unregistered entrepreneurs. Research within this perspective has largely been theoretical and focuses on the potential interaction between formal and informal institutions, and emphasizes that the decision to register is strategic in nature as rational decision makers weigh the costs and benefits of registration (De Castro, *et al.,* 2014, Siqueira, Webb, & Bruton, *forthcoming*, Uzo & Mair, 2014). However, this research gives little attention to the entrepreneurs' individual attributes and the firm's strategic actions and organizational processes within the informal economy that may influence the entrepreneur's likelihood of registering.

Drawing upon a variety of theories in management research this study moves beyond traditional macro-level explanations of the informal economy (Dau & Cuervo-Cazurra, 2014; Thai & Turkina, 2014) and argues that examining micro- and firm-level differences between registered and unregistered entrepreneurs may inform current theorizing on the informal economy (Barney & Felin, 2013, Webb & Ireland, 2015). Traditional macro-level theories of the informal economy provide adequate explanations for why entrepreneurship in informal institutional environments exists (quadrant 1 of figure 1.1); however, it does little to explain why entrepreneurs operating in informal institutional environments may participate in the formal economy (quadrant 2 of figure 1.1). While entrepreneurs in informal institutional environments are generally participating in the informal economy they may participate in either the formal or informal economy. This chapter examines the differences between entrepreneurs in quadrants 1 and 2 of figure 1.1 that help to explain and predict which entrepreneurs operating in an informal institutional environment are likely to exit the informal economy. Specifically, this study develops theory concerning how an entrepreneur's motivation for starting a business and level of education can influence the likelihood of registration. It then posits that firms operating as a family business can accrue specific advantages (e.g., relational governance) that can lead to lower reliance on formal institutions, which may lead to a lower likelihood of registration. Next, it develops theory on how the entrepreneur's strategic decision to cross institutional boundaries may increase institutional pluralism and transaction cost hazards leading to a greater likelihood of registration.

These ideas are empirically examined using a sample of 2,009 entrepreneurs operating in an urban slum in Rio de Janeiro, Brazil. Urban slums represent an informal institutional environment and are prevalent around the world (Gras & Nason, 2015). It is estimated that there are more than 200,000 slums across the world containing over one billion people (Davis, 2006). According to estimates by the UN Human Settlements Programme (UN-HABITAT) the number of slum-dwellers is expected to double to over two billion by the year 2030 (UN-HABITAT, 2003). How to manage and improve urban slums represent one of the biggest policy challenges facing cities throughout the world yet remains largely unexamined by management scholars (Ginther & McGahan, 2015; McGahan, 2012; Sclar, Garau, & Carolini., 2005; Sudhinaraset, Ingram, Lofthouse, & Montagu, 2013).

To date, large datasets are uncommon in informal economy research due to limitations on identifying and accessing entrepreneurs that operate informally (Bruton, 2010; Bruton *et al.*, 2013). Consequently, empirical findings on the informal economy "remain tentative because they derive from only a small number of surveys and relatively small samples" (Williams & Nadin, 2010: 371). The data used in this study derive from a community survey of entrepreneurs in the urban slum of Manguinhos in Rio de Janeiro, Brazil. The survey was administered door by door by a third party on behalf of the state government of Rio de Janeiro to assist in identifying and evaluating the entire population of entrepreneurs in the community. As such, this study provides a unique and rich understanding of an important and understudied context and avoids potential biases in sample selection, which is difficult to minimize in informal economy research because entrepreneurs operating informally may be unwilling to acknowledge that they are operating illegally (Bruton, Ireland, & Ketchen., 2012; Godfrey, 2011; London & Hart, 2011; McGahan, 2012).

Currently, entrepreneurs in Rio de Janeiro's urban slums operate almost exclusively in the informal economy; however, a small percentage of entrepreneurs (~ 7%) are registered (Quadrant 2) (EGP-Rio, 2010). The fact that some entrepreneurs choose to operate as a registered business within these urban slums, an almost entirely informal institutional environment, is puzzling and provides a good context to examine the attributes and strategic behavior between registered and unregistered entrepreneurs that may help to explain and predict an entrepreneur's exit out of the informal economy and into the formal economy through registration. This study makes several contributions to different streams of literature on the informal economy. First, it contributes to current theorizing on the informal economy by showing that agency and motivation oriented explanations are particularly relevant in informal economy research in informal institutional environments where the structuralist perspective on the informal economy has largely assumed that unregistered entrepreneurs are forced into the informal economy out of necessity and concerns for survival (Castells & Portes, 1989). Empirical findings in this study illustrate that entrepreneurs' start-up motivations and strategies are quite heterogeneous and point to the need for greater attention and theorizing on the heterogeneous nature of start-up motivations and strategies in less developed contexts (Bruton *et al*., 2013). This study also adds to the institutional perspective by showing that the interaction between entrepreneurs and their clients and suppliers from different institutional environments may influence the likelihood of registration (Webb *et al*., 2009a; Webb *et al*., 2013). Specifically, this study finds that crossing institutional boundaries to interact with clients or suppliers increases the likelihood of registration even after controlling for the level of difficulty the entrepreneur faces from government oversight and regulation.

In the following sections specific hypotheses are developed on the likelihood of registration and then empirically examined using logistic regression analysis. After controlling for a variety of variables across different levels of analysis and performing robustness checks, the hypotheses developed in this study are largely supported. The study concludes with a discussion of the empirical results, implications for current theory and policymakers, and potential avenues for future management research.

THEORY DEVELOPMENT AND HYPOTHESES

Start-up Motivation

A large body of research in entrepreneurship has focused on understanding the extent to which personal attributes of the entrepreneur influence the identification, evaluation, and exploitation of entrepreneurial opportunities and their associated performance outcomes. Research suggests that an entrepreneur's motivation for starting a business is a salient attribute that influences behavior and how the entrepreneur navigates the entrepreneurship process (Shane, *et al*., 2003). While the stages of the entrepreneurship process of identification, evaluation, and exploitation are the same for registered and unregistered entrepreneurs, the nature and timing of activities, access to resources, and incentives of the entrepreneur may vary considerably based on whether the entrepreneur remains unregistered and whether the entrepreneur navigates the entrepreneurship process in a formal or informal institutional environment (Bruton *et al*., 2013; Webb *et al*., 2013; Williams & Nadin, 2010). Institutions either facilitate or hinder the entrepreneur's ability to navigate each stage of the entrepreneurship process (Shane, 2000; Sine & David, 2010). At the earliest stage of the entrepreneurship process institutions influence an entrepreneur's alertness to entrepreneurial opportunities as entrepreneurs are less likely to identify or be alert to the entrepreneurial opportunities that formal institutions define as illegal or informal institutions consider as illegitimate (Webb, Kistruck, Ireland, & Ketchen, 2009b). Institutions not only influence the entrepreneur's alertness to opportunities but also the entrepreneur's ability to acquire and leverage resources to exploit entrepreneurial opportunities effectively and to grow the business (De Soto, 2000; Godfrey, 2015; Webb & Ireland, 2015). Taken together, this research suggests that the entrepreneur's decision to register is driven by two overarching concerns: (1) the need to obtain legitimacy and other intangible benefits (e.g., trust, reputation), and (2) to more efficiently navigate the entrepreneurship process by gaining access to tangible benefits (e.g., credit, property rights, training) from formal institutions for which informal institutions often cannot act as an efficient substitute (Kimura, 2011; Kistruck, Webb, Sutter, & Ireland, 2011; Lam & Paul, 2013; Odegaard, 2008; Portes & Sensenbrenner, 1993; Sutter, Webb, Kistruck, & Bailey, 2013). (See Table 4.1 for a list of potential benefits associated with registration for both the entrepreneur and government).

While both efficiency and legitimacy concerns may be present at the same time, informal economy research is unclear concerning which concern dominants the entrepreneur's registration decision and under what conditions. Entrepreneurs operating in informal institutional environments characterized by formal institutional voids (e.g., lack of property rights, access to credit, public infrastructure) (Webb, Ireland, & Ketchen, 2014) may seek to register their businesses in order to more efficiently navigate the entrepreneurship process independent of their concern for legitimacy and pressures from formal institutions. Yet, despite ample empirical findings that support a relationship between the entrepreneur's motivation for starting a business and efficient behavior, little is known about this relationship in the context of the informal economy and lesser developed institutional contexts. To date, informal economy research from a structuralist or institutional perspective that explains the rise of marginalized communities has largely conceptualized entrepreneurs in such environments as a homogenous group of necessity-driven entrepreneurs who start businesses due to no other employment opportunities or because they cannot comply with regulatory requirements (Castells & Portes, 1989; De Soto, 1989, 2000). Consequently, little is known about the heterogeneous motivations of entrepreneurs in less developed contexts and their relationship to the entrepreneurship process and business registration (Skousen & Mahoney, 2015). Scholars working within less developed contexts have long recognized the diverse nature and motivations of entrepreneurs in such contexts; however, there has been little research that has examined how such variation in motivations leads to the exit out of the informal economy through registration.

This study follows prior research in conceptualizing an entrepreneur's start-up motivation by distinguishing between opportunity and necessity-driven entrepreneurship (Reynolds, *et al*., 2001), also referred to as push and pull factors for starting a business. Although, the nomenclature may differ, there is general consensus that necessity-driven entrepreneurs are considered to be motivated mainly by push factors, while pull factors form the basis of opportunity-driven entrepreneurs (Verheul, Thurik, Hessels, & van der Zwan, 2010). Prior research has used this categorization as an antecedent to specific entrepreneurial behavior and/or performance outcomes (Amit & Muller, 1995; Hakim, 1989; Kirkwood, 2009; Schjoedt & Shaver, 2007; Shapero & Sokol, 1982). Push factors refer to the conflict between one's current and one's desired occupational status that may push an individual into starting a business (necessity-based entrepreneurship) when other alternatives to achieve an individual's desired outcomes are unavailable. Common examples of push factors include unemployment and dissatisfaction with current employment. Pull factors refer to the entrepreneur's expectation of potential awards and being better off by starting a business. Examples of pull factors include autonomy, independence, need for control, and social status (Bhola, Verheul, Thurik, & Grilo, 2006; Uhlaner & Thurik, 2007).

To date comparative studies that have considered motivation as an antecedent to entrepreneurial behavior have disregarded the registration status of the entrepreneur. This is largely due to limitations on identifying and accessing entrepreneurs that operate informally (Bruton, 2010; Bruton *et al*., 2013). Current estimates suggest that informal activity represents between 40 to 60 percent of GDP in many emerging economies (Schneider, 2002, 2005). Thus, our current understanding of differences between registered and unregistered entrepreneurs and their economic and social implications remains limited. Recent studies in nascent entrepreneurship (e.g., PSED and GEM studies) tend to include the registration status of nascent entrepreneurs; however, this does not capture the essence of the informal economy as nascent entrepreneurs that participate in such surveys are generally in the process of formalizing their business without the intent of operating in the informal economy.

While differences in motivations between registered and unregistered entrepreneurs remains understudied, research has shown that push and pull motivations for starting a business tend to influence how entrepreneurs navigate the entrepreneurship process (Shane, Locke, & Collins, 2003). For example, entrepreneurs motivated by pull factors are associated with higher growth ambitions, risk tolerance, confidence to overcome obstacles, and a lower fear of failure compared to entrepreneurs driven by push factors (Bhola, Verheul, Thurik, & Grilo, 2006; Morris, Miyasaki, Watters, & Coombes, 2006). As a result, entrepreneurs motivated by pull factors tend to be financially more successful than entrepreneurs motivated by push factors (Amit & Muller, 1995). However, recent research suggests that necessity-based entrepreneurs may share some common characteristics of opportunity-based entrepreneurs such as a desire to maintain and even to increase income (Hessels *et al*., 2008). Thus, recent studies have begun to distinguish a subset of opportunity-motivated entrepreneurs into improvement-driven entrepreneurs who seek to increase their independence and autonomy, or their personal income but are not pushed into entrepreneurship or considered to be necessity-based entrepreneurs (Bosma *et al*., 2011; Stephan *et al*., 2015).

In sum, research on entrepreneurial motivation suggests that entrepreneurs who are driven by opportunity, including improvement-driven entrepreneurs, are more likely to seek productivity and efficiency gains compared to entrepreneurs driven by necessity. As registration provides entrepreneurs with better access to formal institutions that can enhance both productivity and efficiency, entrepreneurs driven by opportunity are expected to be more likely to register.

Hypothesis 1a: *Opportunity-driven entrepreneurs are positively associated with the likelihood of registration.*

Hypothesis 1b: *Improvement-driven entrepreneurs are positively associated with the likelihood of registration.*

Human Capital

Entrepreneurship research also suggests that an entrepreneur's level of human capital may be a key indicator of the entrepreneur's ability to successfully identify, evaluate, and exploit entrepreneurial opportunities (Baum, Locke, & Smith, 2001; Chandler & Hanks, 1994; Shane, 2000). Human capital refers to "the skills and knowledge that individuals acquire through investment in schooling, on-the-job training, and other types of experience" (Unger, Rauch, Frese, & Rosenbusch, 2011: 343). Human capital theory (e.g., Becker, 1962, 1964; Schultz, 1961) suggests that entrepreneurs who have a greater stock of knowledge will have greater cognitive ability which will lead to more productive and efficient activity (Block & Sandner, 2009). Hence, individuals with more knowledge or with a higher quality stock of knowledge are posited to be better at perceiving and exploiting entrepreneurial opportunities than are individuals with less human capital (Davidsson & Honig, 2003; Shane, 2000). Unger *et al*.'s (2011) meta-analysis finds empirical support that further corroborates the positive relationship between human capital and entrepreneurial performance.

In the context of less developed institutional settings, human capital also plays a key role in sense making. Entrepreneurs in such settings deal with various sources of institutional ambiguity between legal rules and enforcement capabilities by government agencies and informal institutions that act as substitutes for formal institutions (Webb, *et al*., 2013). As entrepreneurs seek to more effectively navigate the entrepreneurship process they will become more aware of institutional pluralism and competing pressures between formal and informal institutions (De Castro *et al.*, 2014). Further, higher levels of human capital have been shown to lead to greater willingness to engage with surroundings, to search for new products or vendors, and transact with unfamiliar exchange partners (Kintgen, Kroll, & Rose, 1988; London, Esper, Grogan-Kaylor, & Kistruck, 2014; Rosa & Viswanathan, 2007). Thus, higher levels of human capital suggest that entrepreneurs in informal institutional environments will have greater capacity to understand formal institutions and registration requirements.

While the concept of human capital is multi-dimensional in nature, the current study focuses on the entrepreneur's education level as a key measure of productivity-enhancing human capital, which has been shown to be positively related to entrepreneurial performance (Murphy, Shleifer, & Vishny, 1991). Given that higher levels of education have been shown to be associated with more productive and efficient activity, and sense making of the institutional environment, entrepreneurs with higher levels of education are expected to be more likely to register.

Hypothesis 2: *As the entrepreneur's level of education increases, the entrepreneur is more likely to register.*

Family Business

In addition to the personal attributes of the entrepreneur, ownership structure may be a salient predictor of registration. Recent management research posits that the informal economy is supported by groups of individuals sharing a collective identity upon which the entrepreneur can derive support and access to resources (Webb *et al.*, 2009a). One way in which entrepreneurs can benefit from such groups is to operate as a family business. Family business is a common ownership structure in the informal economy. However, it is difficult to define a family business operating in the informal economy based on legal ownership agreements as is generally done in family business research in the formal economy or more developed institutional contexts (Khavul, Bruton, & Wood, 2009). In this research, a family business is defined as a business that is owned solely by family members or in the case where there is only one owner the owner employees family members and considers the firm to be a family business.

In the family business research literature, studies submit that family businesses have characteristics that differentiate them from non-family businesses and that such differences allow family businesses to accrue specific advantages compared to non-family businesses (Astrachan, 2010; Habbershon & Williams, 1999; Moores, 2009). For example, family businesses have the advantage of implicit contracting that can be enforced through informal control mechanisms such as creating a culture of compliance or clan like behavior to reduce agency and monitoring costs (Daily & Dollinger, 1991; Kotey, 2005; Schulze, Lubatkin, Dino, & Buchholtz, 2001). Other research studies show that family businesses tend to have a longer-term orientation as family business owners are particularly interested in the collective welfare of family members and the stability and longevity of the business (Le Breton-Miller & Miller, 2006; Miller & Le Breton-Miller, 2006; Roberts, 1994). Collectively, these advantages often lead to higher levels of trust within family businesses compared to non-family businesses (Zahra, Hayton, Salvato, 2004).

The extant research on family business suggests that the distinguishing features of family businesses have an important influence on how family businesses navigate the entrepreneurship process. For example, studies show that family businesses exhibit lower risk propensities, which leads to lower use of high growth strategies and entrepreneurial orientation (Dertouzos, Lester, & Solow, 1989; Naldi, Nordqvist, Sjoberg, & Wiklund, 2007). Other studies have shown that family businesses differ in their resource accumulation strategies. In the context of the informal economy in Africa, Khavul *et al.*, (2009) found that unregistered family businesses rely more heavily upon family resources to fund their businesses therefore requiring less dependence on outside forms of capital. Similarly, Dyer and Mortenson (2005) found that family businesses operating in a hostile economic environment in Lithuania were more successful than non-family businesses due to their ability to draw on family resources including both human and financial capital. These findings indicate that access to family resources may increase the family business' ability to survive and compete particularly in institutional environments that lack well-functioning formal institutions (Sirmon & Hitt, 2003; Webb & Ireland, 2015). Thus, family businesses are expected to be less likely to register compared to non-family businesses as family businesses tend to rely less on formal institutions as a control mechanism and have greater access to alternative resources in informal institutional environments. As a result, family businesses may be less likely to seek the benefits that formal institutions offer through registration compared to non-family businesses.

Hypothesis 3: *Family businesses are negatively associated with the likelihood of registration.*

Crossing Institutional Boundaries

The central tenet of recent management research on the informal economy is the concept of legitimacy and on the institutions that confer it that ultimately explains the rise of the informal economy. This argument is articulated by the recently advocated definition of the informal economy as "economic activities that are outside of formal institutional boundaries (i.e., illegal) yet fall within informal institutional boundaries (i.e., legitimate)" (Webb, Ireland, & Ketchen, 2014: 3). Notably, this definition of the informal economy marks a clear distinction between formal and informal institutions, which is a defining feature of the institutional perspective. From an institutional perspective, legitimacy is not a commodity but rather "a condition reflecting perceived consonance with relevant rules and laws, normative support, or alignment with cultural-cognitive frameworks" (Scott, 2008: 59-60). The entrepreneur's concern to obtain legitimacy from others can rest among a variety of different groups that can range from the broader society to smaller groups that share a collective identity (Bruton, *et al*., 2012).

In informal institutional environments economic activity is largely governed by informal institutions and the institutional boundaries between formal and informal institutional environments are often clearly distinguishable. Godfrey (2011) maintains that the informal economy is highly influenced by the entrepreneur's interaction with and perceptions of formal institutions. As a consequence the entrepreneur's decisions of where to locate the business, with whom to interact, and the type of entrepreneurial opportunity the entrepreneur pursues have important strategic implications for the unregistered entrepreneur. If unregistered entrepreneurs decide to cross institutional boundaries into a more formal institutional environment they encounter a different set of institutionalized rules, norms, and expectations about registration and the legitimacy of the informal economy. Such differences lead to increased institutional pluralism and pressures to formally adopt business practices that are consistent with their clients and suppliers in order to obtain legitimacy (De Castro *et al*., 2014; DiMaggio & Powell, 1983; Webb *et al*., 2009a). Further, if unregistered entrepreneurs are detected by the government they have the potential to be shut down or severely penalized (Webb *et al.*, 2013). The likelihood of government detection may be influenced by how visible and accessible the business is to formal institutions (Scott, 2013; Scott & Haseki, 2015; Venkatesh, 2006). Unregistered entrepreneurs operating their businesses within their own homes or outside of the home without a physical store front (e.g., door-to-door salesman or street vendor) may limit their detection and pressure to comply with formal institutions; however, it may also reduce their ability to efficiently exploit entrepreneurial opportunities and grow their businesses. For example, entrepreneurs operating in the home may have limited ability to openly market their product and services and instead must rely more heavily upon word of mouth marketing (McPherson & Liedholm, 1996).

In addition to encountering a different set of institutionalized rules and norms, crossing institutional boundaries may lead to significant transactional hazards and problems associated with weak bargaining positions. In the case of less developed contexts where specialized assets may be low and transactions are generally small, carried out in cash, and occur more frequently, switching costs associated with changing suppliers may still be relatively high as unregistered firms are resource constrained and may have neither sufficient capital nor ability to rely on formal institutions to rectify transactional disputes (Fairbourne, Gibson, & Dyer, 2007; Godfrey & Jensen, 2015). Because the informal economy relies heavily on trust between exchange partners to overcome formal institutional voids and is supported by social networks that consider illegal activity legitimate, the costs of searching for and switching to a new network may be costly (Lyon, 2000; Rivera-Santos & Rufin, 2010; Webb, *et al.*, 2009a). Such costs may be particularly relevant in less developed contexts as transactions occur more frequently and research has shown that repeated transactions lead to greater embeddedness within social networks (Uzzi, 1996). In many cases, only a few suppliers may be willing to work with unregistered entrepreneurs and therefore entrepreneurs may be limited to suppliers within their informal networks (De Soto, 2000). Consequently, unregistered entrepreneurs may subject themselves to the costs associated with small numbers bargaining leading to strategic vulnerability as the supplier can engage in opportunistic pricing and other opportunistic behavior. For example, entrepreneurs seeking financing may seek capital from risky loan sharks that often engage in predatory lending practices and charge exorbitant interest rates (Kistruck, *et al.*, 2011).

While transactions that occur outside of government oversight can often be classified as pure market exchanges, the specifics of the transaction are largely governed by the firms with the stronger bargaining position of the two firms, which allows them to also extort the majority of economic rents (Chen, 2007; Hall, Matos, Sheehan, & Silvestre, 2012; Kistruck *et al*., 2011). This phenomenon places unregistered firms at a significant disadvantage and subject to substantial transaction cost hazards, which may take the form of enforcement, monitoring, negotiation and searching costs to correct a transaction with suppliers that did not comply with *ex ante* or *ex post* expectations (Kistruck, Beamish, Qureshi, & Sutter, 2013). Taken together, it is expected that these hazards may be amplified as unregistered entrepreneurs cross institutional boundaries to more formal institutional environments because they will tend to have limited access to formal institutions and must rely upon firms that have a stronger bargaining position. To help mitigate such hazards, entrepreneurs that cross institutional boundaries are expected to have a greater incentive to register their businesses relative to those that do not cross institutional boundaries. In summary, the preceding arguments suggest a positive relationship between crossing institutional boundaries and the likelihood of registration.

Hypothesis 4a: *Entrepreneurs who cross from informal institutional environments to a more formal institutional environment to <u>sell</u> goods and services are positively associated with the likelihood of registration.*

Hypothesis 4b: *Entrepreneurs who cross from informal institutional environments to a more formal institutional environment to <u>buy</u> goods and services are positively associated with the likelihood of registration.*

Institutional Voids

A fundamental argument of the institutional perspective is that entrepreneurs in less develop contexts may be unable to participate in the formal economy because of formal institutional voids – “situations where institutional arrangements that support markets are absent, weak, or fail to accomplish the role expected of them” (Mair & Marti, 2009: 419). The presence of institutional voids may hinder the entrepreneur's ability to garner sufficient resources and capabilities to gain access to formal institutions. As noted by Webb *et al*., (2009b), less developed contexts tend to have no formal capital markets, high information asymmetry in labor markets, undependable and inadequate public infrastructure, weak contracts and enforcement, and weak property rights protections. Under such conditions, socioeconomic activities are governed by informal institutions and informal governance mechanisms (e.g., norms, values, reputation, family and social ties) (Webb *et al*., 2009a). Yet, informal institutions may vary in their ability to act as an efficient substitute for formal institutions in an effort to offset the negative effects associated with formal institutional voids (Helmke & Levitsky, 2003). Thus, specific institutional voids may have a stronger relationship with the likelihood of registration relative to others.

While institutional voids may have a direct negative effect on the likelihood of registration, the focus of this study is on the strategic behavior of entrepreneurs and their relationship with registration. The level of difficulty that an entrepreneur has with institutional voids may hinder his or her ability to venture outside of informal institutional environments. Thus the level of difficulty with institutional voids may moderate the positive effect of entrepreneurs crossing institutional boundaries on the likelihood of registration by weakening the relationship. Entrepreneurs that cross institutional boundaries may gain access to better resources and develop capabilities that may help compensate for institutional voids. However, if the entrepreneur is facing significant challenges due to institutional voids it may be unlikely that the positive effects of crossing institutional boundaries may be realized by the entrepreneur. The underlying assumption of research on institutional voids is that weak or absent institutions hinders the ability of entrepreneurs to garner resources to comply with formal institutions

(Chakrabarty & Bass, 2013; De Soto, 1989, 2000; Mair, Marti, & Ventresca, 2012; Webb & Ireland, 2015). Therefore, it is expected that the higher level of difficulty associated with institutional voids will weaken the relationship between crossing institutional boundaries and the likelihood of registration. The preceding arguments can be summarized into the following hypotheses:

Hypothesis 5: *Institutional voids are negatively associated with the likelihood of registration.*

Hypothesis 6: *The effect of crossing institutional boundaries on the likelihood of registration will be weaker when institutional voids are higher.*

Figure 4.1 displays a summary of the proposed relationships.

DATA AND METHODS

Data

The data used in this study derive from a community survey of entrepreneurs in the urban slum of Manguinhos in Rio de Janeiro, Brazil. Logistic regression analysis was used to predict the likelihood of registration given that the dependent variable (*formal*) in this study is dichotomous. The survey was performed by a third party administrator on behalf of the state government of Rio de Janeiro to assist in identifying and evaluating the entire population of entrepreneurs in the community. The survey was administered door by door by trained employees during the period July 2008 to April 2009. A total of 2,833 entrepreneurs were identified. Of this total, 57 refused to participate in the survey and 61 were unable to be contacted. For those entrepreneurs that were unable to be contacted, survey administrators made an attempt to visit them on three different occasions on different days and times in an effort to have them participate in the survey. The total number of entrepreneurs that completed the survey was 2,715 representing 95.8% of the total population of entrepreneurs identified. The responses were analyzed and subsequently verified in the field on approximately 20% of the respondents to ensure validity. For purposes of this study, businesses that were associated with the government or operated as a not-for-profit (a total of 98 businesses) were excluded resulting in an available sample size of 2,617. After removing missing responses, which tend to be high in impoverished settings (Gras & Nason, 2015), the total sample size was 2,009 businesses.

Variables

Dependent Variable. The dependent variable in this study is a dichotomous response variable to the survey question of “is your business formal or informal?” *Formal* is defined as a business that is registered with the government. A binary variable was set to “1” if the business was registered and to “0” if otherwise.

Explanatory Variables. *Motivation* was measured based on the entrepreneur’s response to the question, “why did you start the business?” Consistent with prior literature on entrepreneurial motivation, this study distinguishes between opportunity-driven, improvement-driven, and necessity-based entrepreneurship. Dummy variables were created for each group. *Opportunity-driven* entrepreneurs were set to “1” if the motivation for starting the business was because the opportunity emerged. *Improvement-driven* entrepreneurs were set to “1” if the entrepreneur started the business to achieve greater independence/autonomy or to increase income but not out of necessity. *Necessity-based* entrepreneurs serve as the reference group and were coded as “1” if the entrepreneur started the business because they were unemployed or other necessity-based reason listed by the entrepreneur. *Education* was measured as a continuous variable based on the level of formal education obtained, ranging from “1” (no formal schooling) to “8” (attended university). *Family* business was measured based on the entrepreneur’s response to the question, “is your business considered a family business, non-family, or mixed?” Businesses that operated as a family business were coded as “1” and set to “0” if otherwise.

Crossing institutional boundaries was measured based on whether the entrepreneur crossed institutional environments to exchange goods and services with *clients* and *suppliers*. The location of *clients* and *suppliers* was each coded as a continuous variable where *clients* and *suppliers* located within Manguinhos were set to “1”, in adjacent neighborhoods outside of Manguinhos to “2”, in the city outside of adjacent neighborhoods to “3”, and outside of the city limits of Rio de Janeiro to “4”. The use of a continuous measure of crossing institutional boundaries is conceptually accurate. Manguinhos is surrounded by adjacent neighborhoods (e.g., Benfica, Bonsucesso, Higienopolis, Jacarezinho) that are less developed compared to other more affluent neighborhoods in Rio de Janeiro (e.g., Zona Sul, City Center, etc.), which justifies the use of a continuous measure of crossing institutional boundaries.

Several measures of institutional voids were created that measure the degree of difficulty that entrepreneurs encounter as a consequence of institutional voids. Such voids may be an important indicator of whether an entrepreneur has the ability to register. Each measure of institutional voids is based on the entrepreneur’s response to the question of what is the level of difficulty the entrepreneur has with a specific institutional void. Responses ranged on a scale from “High” to “Not Applicable”. Responses were coded on a 4-point scale where High = “3”, Medium = “2”, Low = “1” and Not Applicable = “0”. Responses for those entrepreneurs that responded “Did Not Know” were coded as “0”.

Finance voids represent the absence or lack of quality financial markets. This study focuses on the ability of the entrepreneur to access credit. This measure is captured by the entrepreneur’s response to the question, “what is the level of difficulty to access credit?” *Infrastructure* voids represent the absence or lack of quality public infrastructure. The entrepreneur was asked a separate question for the level of difficulty with each of the following types of infrastructure: electricity, water and telecommunication. An aggregate score was created by combing each response to measure the overall difficulty with infrastructure voids. *Labor* voids represent the absence of skilled labor in the community. This measure is captured by the entrepreneur's response to the question, "what is the level of difficulty to find skilled/qualified labor in the community?" *Market* voids represent the absence of well-functioning exchange markets. This study focuses on the general market conditions of the entrepreneur's customers. This measure is captured by the entrepreneur's response to the questions, "what is the level of difficulty with the economic conditions of clients?" and "what is the level of difficulty of having few customers?" An aggregate score was created combing each response to measure the overall difficulty with market voids. These measures for institutional voids represent indicators of community-specific institutional conditions. They are measured at the firm-level yet represent the firm's perceptions of the institutional environment of the community in which they operate.

Control Variables. A number of control variables spanning different levels of analysis were included in the regression analyses that could potentially influence the likelihood of registration. At the individual-level, controls were created for the entrepreneur's *age* and *gender*. The entrepreneur's *age* was coded as a continuous variable in number of years. Research on gender in the context of informal economy suggests that female entrepreneurs tend to operate at lower levels of organization and scale, without a formal space to operate, and to not separate work from their household (Williams & Gurtoo, 2011). As such, this study controls for potential gender differences by creating a binary variable coded as "1" for male and "0" for female.

Firm- and community-level control variables were included to proxy for the visibility of the firm by law enforcement/government agencies and the size of the firm. The first measure, *area*, identifies the location of the business within Manguinhos and was coded based on the four geographic areas within Manguinhos that the government uses to manage government programs. Each area within Manguinhos varies based on its level of economic development and accessibility. The area that was identified as having the greatest number of entrepreneurs (both registered and unregistered) was coded as “1” and the other areas were set to “0”. The second measure of visibility, *oversight*, was measured based on the entrepreneur’s response to the question, “what is the level of difficulty you have with government regulation and oversight?” Responses ranged on a scale from “High” to “Not Applicable.” Responses were coded on a 4-point scale where High = “3”, Medium = “2”, Low = “1” and Not Applicable = “0”. Responses for those entrepreneurs that responded “Did Not Know” were coded as “0”. Third, firms operating in a storefront property, s*torefront*, were coded as “1” if the entrepreneur operated in either an owned or rented storefront property and set to “0” if otherwise (e.g., street cart, in the home, door to door sales, etc.). To a certain degree, this measure also controls for the firm’s size as entrepreneurs that have garnered enough resources to operate in a storefront property tend to be bigger and more financially successful. To further control for firm size a control variable was created for firms that had *employees*. Firms with employees were set to “1” and “0” if otherwise. Finally, this study controls for the firm’s *industry* which was categorized into 14 different industries based on the products or services sold by the firm.

RESULTS

Table 4.2 displays descriptive statistics and a correlation matrix for the variables. The logistic regression results are summarized in Table 4.3. Interpretation of coefficients is based on the full model (Model 1). Overall, the results indicate that most explanatory variables were significant and consistent with the hypothesized signs. The full model had a total sample size of 2009 entrepreneurs with a McFadden Pseudo R2 of 0.37.

Hypotheses 1a and 1b predicted that opportunity and improvement-driven entrepreneurship were positively associated with registration. As shown in Table 4.3, the coefficient for opportunity-driven motivation was both positive and significant at $p < .001$. However, improvement-driven entrepreneurs were not statistically different than necessity-based entrepreneurs. Thus hypothesis 1a was supported while 1b was not supported. Hypothesis 2 suggested that the likelihood of registration would be positively associated with education. The coefficient for education was both positive and significant at $p < .001$ and consistent across all models corroborating hypothesis 2. Hypothesis 3 suggested that family businesses would be negatively associated with the likelihood of registration. Contrary to expectations, Hypothesis 3 was not supported.

As predicted by hypotheses 4a and 4b, crossing institutional boundaries was positive and significant for both *clients* and *suppliers*. Hypotheses 4a and 4b suggested that as entrepreneurs cross from informal institutional environments into more formal institutional environments to buy or sell products or services they will be more likely to register. As shown in model 1 of Table 4.3, the coefficients for both *clients* and *suppliers* were both positive and significant at $p < .001$ and $p < .01$, respectively). Therefore support was found for hypotheses 4a and 4b.

Hypotheses 5 predicted that institutional voids would be negatively associated with the likelihood of registration. As noted in the correlation matrix, measures for institutional voids were highly correlated. To avoid potential biases associated with multicollinearity, multiple regression analyses were estimated but not presented in the regression table. *Finance* and *labor* voids were identified as negatively associated with the likelihood of registration and statistically significant ($p < 0.10$), whereas no statistical significance was identified for *infrastructure* and *market* voids. These findings suggest partial support for hypothesis 5.

Hypotheses 6 predicted that institutional voids may weaken the relationship between crossing institutional boundaries and the likelihood of registration. Models 2 and 3 introduce interaction effects between *finance* voids and *clients* and *suppliers*. Contrary to hypothesized, no support was found for hypothesis 6. Additional regression analyses were performed, but not presented, to examine interaction effects for each measure of institutional voids. Similarly, no statistically significant relationships were identified.

To test the robustness of the results and all supplemental analyses, the models were estimated using complementary log log (cloglog) with robust standard errors. Cloglog assumes a complementary log-log distribution for the errors instead of a logistic distribution and is often used when the outcome variable is less frequent as is the case for the dependent variable in the context of this study. The results from the cloglog estimations were consistent with the logistic regression results across the models except for the *finance* variable that was no longer statistically significant. As an additional robustness check, alternative coding was also performed for the *family*, *client*, *suppliers*, *infrastructure* and *market* variables. Rather than code *family* as a dichotomous variable, the variable was recoded as a continuous variable where Family = "2," Mixed = "1," and Non-Family = "0". Logistic regression results with the new coding were consistent with those obtained for the dichotomous measure, which identified no relationship between *family* and the dependent variable. Additionally, rather than code *clients* and *suppliers* as a continuous variable, the variable was recoded as a dichotomous variable where entrepreneurs who had clients or suppliers outside of Manguinhos and adjacent neighborhoods were set to "1" and those cases where the entrepreneur had clients or suppliers inside of Manguinhos and adjacent neighborhoods were coded as "0". Logistic regression results with the new coding were consistent with the continuous measure of *clients* and *suppliers*. Finally, measures for institutional voids that were aggregated (*infrastructure* and *market* voids) were recoded as disaggregated measures and logistic regression results remained consistent with prior results which found no relationship with the likelihood of registration.

As an additional robustness check, the regression models were estimated on a second urban slum in Rio de Janeiro called Rocinha (n=1925; McFadden Pseudo R2: 0.18), which is located in a different region of the city. Rather than code *clients* and *suppliers* as a continuous variable, the variable was recoded as a dichotomous variable where entrepreneurs who had clients outside Rocinha were set to “1” and those cases where the entrepreneur had no clients or suppliers outside Rocinha were coded as 0. Conceptually, the recoding of *clients* and *suppliers* to a dichotomous variable in the case of Rocinha is appropriate. Rocinha is geographically isolated by large hills and mountains with highly affluent adjacent neighborhoods (Gavea and Sao Conrado). By contrast, Manguinhos is surrounded by lesser developed adjacent neighborhoods (Benfica, Bonsucesso, Higienopolis, Jacarezinho) which justify the use of a continuous measure of crossing institutional boundaries. Logistic regression results with the new coding were consistent with those obtained for Manguinhos, however, *finance* was insignificant. Overall, the robustness checks provide further support for the relationships identified in this study. See Table 5.2 for a summary of the results.

DISCUSSION

The purpose of this study was to examine the likelihood of entrepreneurs exiting the informal economy through registration in the context of informal institutional environments. Based on theory and supportive empirical findings this study finds that a variety of antecedents across different levels of analysis influence the likelihood of registration. These results point to the increased need for more micro- and meso-level theorizing of the informal economy with particular emphasis on the entrepreneurs' individual attributes, strategic actions and organizational processes (Barney & Felin, 2013; Bruton, *et al*., 2013; Godfrey, 2011, 2015; Sathe & Jager, 2015).

This study makes a contribution to both the informal economy and entrepreneurship literature by developing theory regarding how an entrepreneur's startup motivation may be associated with the likelihood of registration. While prior entrepreneurship research has focused on how motivation influences entrepreneurial behavior, this study points out that startup motivations may be an important antecedent to the likelihood of registration and to activity in the informal economy in general. This study finds that start-up motivations in less developed contexts are quite heterogeneous in nature and that such motivations are associated with the likelihood of registration. The extant entrepreneurship literature suggests that opportunity-driven entrepreneurs compared to necessity-based entrepreneurs differ significantly in their ability to navigate the entrepreneurship process. The distinction between different motivations and their impact on the entrepreneurship process has not been adequately addressed in the context of the informal economy and informal institutional environments and merits further examination. In this study opportunity-driven entrepreneurs were separated into opportunity and improvement-driven entrepreneurs. Recent research on entrepreneurial motivation suggests that several motivations can be present at the same time and that improvement-driven entrepreneurs may be influenced by relevant push factors normally attributed to necessity-based entrepreneurs (Williams & Nadin, 2010). The results in this study found that improvement-driven entrepreneurs were not statistically different from necessity-based entrepreneurs in their likelihood of registration. This finding suggests that subsets of opportunity-driven entrepreneurs may behave more similarly to necessity-based entrepreneurs in their decision to remain informal.

Lastly, although entrepreneurs driven by opportunity were more likely to register, many remained unregistered. This reality is consistent with recent theorizing that some entrepreneurs may voluntarily choose to participate in the informal economy to avoid the costs associated with formality (Biles, 2009, De Soto, 2000; Perry & Maloney, 2007; Uzo & Mair, 2014; Webb & Ireland, 2015). Future research may consider how the heterogeneity of start-up motivations affects each stage of the entrepreneurship process and the likelihood of registration and other illegal activity beyond not registering such as the use of undocumented workers, skirting health and environmental regulations, or not paying taxes.

Another promising avenue for future research is to examine the ownership structure and agency issues of businesses within the informal economy and their influence on the likelihood of registration. While unregistered entrepreneurs are often self-employed, many unregistered businesses have multiple owners and employees (Bruton *et al*., 2012). However, little is known about how differences in ownership structure affect the entrepreneurship process and the likelihood of registration in the context of the informal economy. This study limited its discussion to family businesses and highlighted that family businesses tend to rely more heavily on informal management practices and culture to minimize agency problems. Family businesses also tend to pursue more conservative low growth strategies and rely less on external sources of funding. These attributes of family businesses suggest that family businesses may be less likely to register. Contrary to expectations the effect of family business on the likelihood of registration was not supported. Family businesses are a common form of business in the informal economy and comprised 33% of businesses in Manguinhos yet little is known about how family businesses differ from other businesses in informal institutional environments and if unregistered family businesses obtain similar benefits as those that are registered. Defining ownership structure is an empirical challenge in informal economy research as formal ownership agreements tend to not be documented (Khavul *et al*., 2009). This study used a self-reported measure of family business based on the entrepreneur's response to the survey question, "is your business considered a family business, non-family, or mixed?" Future, research would benefit from creating a systematic way of measuring ownership structure based on specific characteristics of the business and the relationships between owners and employees. Examining the ownership structure and how it influences each stage of the entrepreneurship process and the likelihood of registration will provide new insight into the underpinning mechanisms that sustain informal activity.

This study also contributes to an expanding stream of research that considers the interaction of formal and informal institutions. Entrepreneurs operating in competing formal and informal institutional environments face competing values, norms, and beliefs about registration. The empirical findings presented in this study are consistent with a growing body of research based on an institutional perspective (Webb *et al*., 2009a). However, this study also illustrated how the likelihood of registration may be partially explained by transactional hazards and the entrepreneur's bargaining position based on work on resource dependence and transaction costs theory (Pfeffer & Salancik, 2003; Williamson, 1985). The complex nature of the interaction between registered and unregistered businesses and formal and informal institutions provides ample opportunities for management scholars to employ other theoretical lenses beyond institutional theory to examine the rise of the informal economy and an entrepreneur's transition out of it (Ketchen, *et al*., 2014). Other theoretical perspectives that focus on the relationship between exchange partners and the nature of transactions (e.g., property rights theory, the resource-based approach, resource dependence theory, and transaction cost economics) may be informative lenses to explain the informal economy that to date have received little attention in informal economy research (Ostrom, 1990; Penrose, 1959; Pfeffer & Salancik, 2003; Williamson, 1985). Several research studies (Bruton, Khavul, & Chavez., 2011; Chen, 2007; De Castro *et al*., 2014) point out that unregistered businesses interact often with registered businesses as unregistered businesses often rely on and even provide registered businesses with raw materials and finished goods. This phenomenon suggests the need for future management research to examine how registered and unregistered businesses interact throughout their value chains, the nature of their transactions, and under what institutional context the interactions occurred. Such research will provide greater clarity into which overarching concern for registration (legitimacy vs. efficiency) dominates and when.

This study also contributes to recent literature on institutional voids. Research on the informal economy suggests that the rise of the informal economy can be partially explained by the presence of institutional voids. The findings presented in this study suggest that the level of difficulty that entrepreneurs have with institutional voids may vary in their effect on the likelihood of registration. This study finds that finance and labor voids are negatively associated with the likelihood of registration. Access to credit and skilled labor significantly hinder the entrepreneur's ability to accumulate resources and to grow the business. Interestingly, as entrepreneurs cross institutional boundaries their difficulty associated with institutional voids did not appear to change as no moderating relationship between institutional voids and crossing institutional boundaries was identified. These findings suggest that registration may not substantially improve entrepreneurs', in less developed contexts, access to formal institutions (De Castro, *et al.,* 2014; De Mel, *et al*., 2013). These findings raise important questions regarding how entrepreneurs in lesser developed institutional environments overcome institutional voids and whether they face negative stigma from organizations and formal institutions that can assist in overcoming institutional voids.

From a policy perspective, several of the research findings are of relevance to policymakers, private agencies, and not-for-profits interested in the informal economy and poverty. This study found that an entrepreneur's level of education is associated with the probability of registration. Unfortunately, access to quality education in informal institutional environments such as urban slums is limited. In Manguinhos around 50% of entrepreneurs did not complete primary education and only 13% completed the Brazilian equivalent of high school. Because previous research indicates that higher levels of education lead to more productive and efficient behavior and better sense making of competing institutions, education policy should be explicitly linked to entrepreneurship policy. In many cases not-for-profit organizations, such as SABRAE in the case of Brazil, and social entrepreneurs have made concerted efforts to fill this institutional void by providing entrepreneurship education and training services to underserved populations. This phenomenon is gaining importance in management research and to policymakers yet much research remains to be done in order to understand the effectiveness of such organizations as substitutes for government agencies and programs.

Also of interest to policymakers is the apparent relationship between industry and registration. For example, entrepreneurs operating in such industries as domestic services, seamstress services, confectionaries, and other basic service industries tend to not register compared to businesses in retail and more professional services. These findings suggest that entrepreneurs who exploit entrepreneurial opportunities in specific industries may be unable to garner enough resources or achieve scale economies sufficient to grow the business and to comply with the costs of registration. It is also reasonable to expect that certain industries may be able to rely less on formal institutions and therefore may be less likely to seek the benefits associated with registration. As such, policymakers should be aware of the diverse nature of businesses and adapt registration policy to be more inclusive in an effort to encourage entrepreneurs, weighing the costs and benefits of registration, to register their businesses.

As previously noted, the informal economy arises, in part, as formal institutions are unable to provide basic services such as public infrastructure. The prominence of urban slums in many developing economies highlights this phenomenon. Urban slums are often characterized by a labyrinth of alleyways and side streets that hinder the mobility of individuals and economic activity. Entrepreneurs who have limited access to such streets are constrained in their ability to draw on resources that require transportation. A review of the data indicates that registered firms tend to be located at or near streets that are accessible by cars. This finding points toward the inherent connection between urban planning and entrepreneurship policy. This connection, however, has remained largely absent in entrepreneurship and policy research and provides an opportunity for management scholars to bridge this important research gap.

While the empirical results provide support for many of the hypotheses developed in this study, this research is not without limitations. The informal economy is a broad concept and this study limits its discussion of the informal economy to registration even though the informal economy may be better conceptualized as residing on a continuum rather than being strictly dichotomous as either registered or unregistered. While it is reasonable to assume that entrepreneurs that cross institutional boundaries will encounter different norms, values, and expectations about registration such differences are not explicitly measured in this study. It also does not identify the registration status of the entrepreneur's clients and suppliers therefore limiting the ability to measure the precise mechanisms that lead to a higher likelihood of registration by crossing institutional boundaries.

Conclusion

As the informal economy and informal institutional environments remain understudied and misunderstood phenomenon, management scholars are well positioned to add value to this relatively new stream of research. This study suggests that a variety of variables across different levels of analysis influence the likelihood that entrepreneurs will transition out of the informal economy through registration. Management research would benefit from a more micro- and meso-level perspective that examines the individual attributes and strategic processes of entrepreneurs to help inform our current macro-level theorizing on the informal economy. In an effort to guide future research, this study outlined important research areas that need further development to understand how entrepreneurs navigate the entrepreneurship process in the context of informal institutional environments. Focusing on these topics will add new value to management research and assist policymakers in improving the standard of living of the billions of people that live in under-served conditions throughout the world.

TABLE 4.1: Benefits Associated with Registration

Benefits to the Entrepreneur		Benefits to Government
Intangible Benefits	**Tangible Benefits**	
Legitimacy	Ability to expand and grow business	Expand tax base
Trust	Avoidance of government penalties	Increased knowledge of economic activity
Respect	Ability to conclude legally enforceable agreements	Improved income distribution
Reputation	Access to trade fairs and export opportunities	Improved health and safety standards
Peace of mind	Access to new or lower cost sources of financing	Economic growth due to increased investment
	Ability to limit personal liability	Increased economic efficiency gains
	Access to government support programs	Enhanced coverage of social security system
	Access to greater networks	
	Ability to openly market goods and services	
	Secure better property rights	

Adapted from Jansson and Chalmers (2001)

FIGURE 4.1: Summary of Proposed Relationships

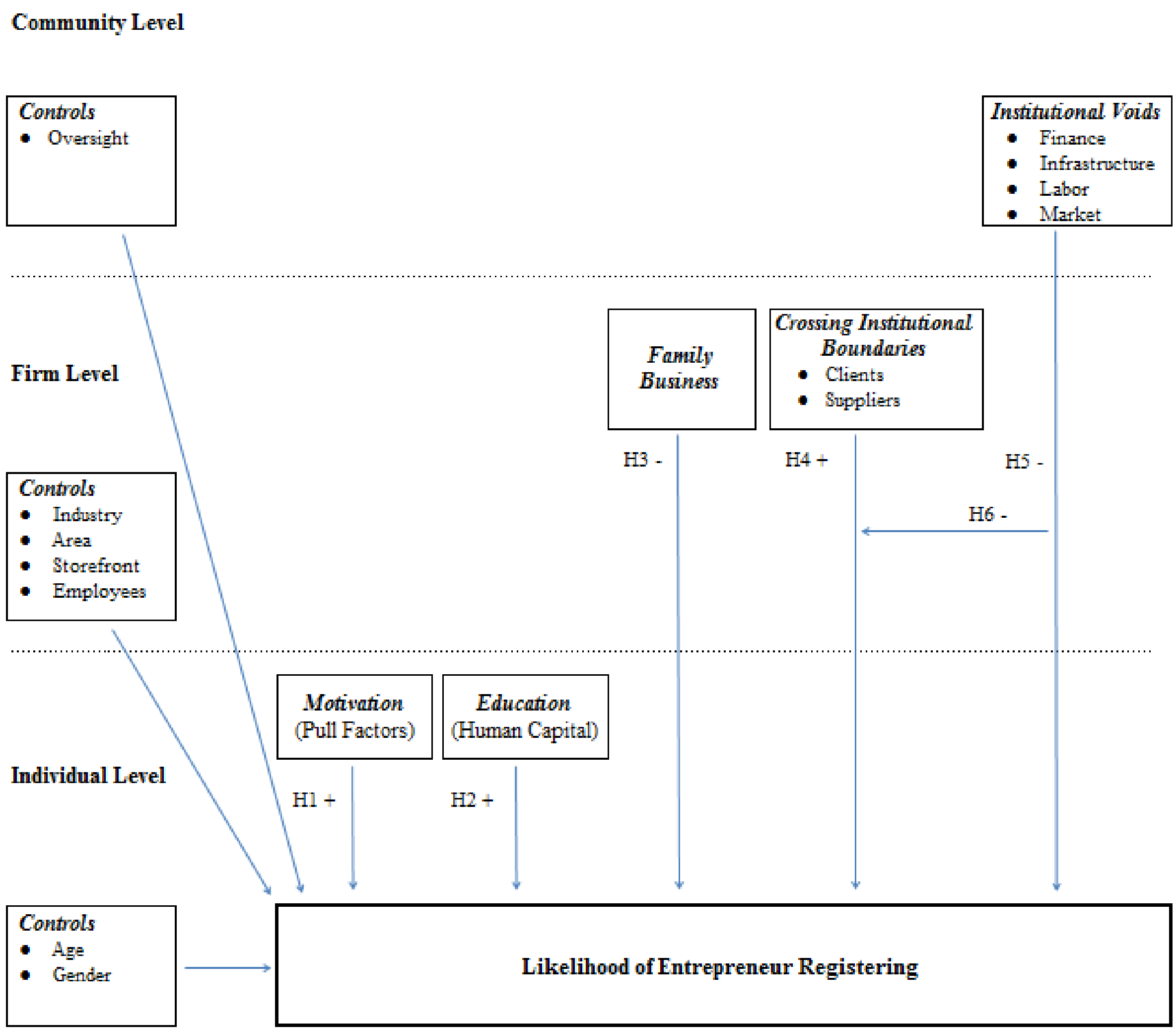


TABLE 4.2: Descriptive Statistics and Correlations*

	Variables	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1.	Formal	0.04	0.19	1.00																
2.	Opportunity Driven	0.06	0.23	0.21	1.00															
3	Improvement Drive	0.31	0.46	0.04	-0.16	1.00														
4.	Education	2.78	1.37	0.18	0.07	0.09	1.00													
5.	Family	0.39	0.49	0.06	-0.02	0.03	-0.02	1.00												
6.	Clients	1.36	0.58	0.16	0.03	0.00	0.05	-0.20	1.00											
7.	Suppliers	2.01	0.68	0.12	0.06	0.08	0.10	0.12	0.21	1.00										
8.	Finance	1.54	1.09	-0.01	-0.06	-0.14	0.03	0.30	-0.11	0.06	1.00									
9.	Infrastructure	5.11	2.88	0.03	-0.06	-0.06	0.03	0.39	-0.10	0.05	0.71	1.00								
10.	Labor	1.53	1.11	-0.01	-0.07	-0.10	0.03	0.35	-0.11	0.02	0.71	0.82	1.00							
11.	Market	3.43	1.60	0.04	-0.04	-0.10	0.01	0.33	-0.10	0.04	0.68	0.72	0.70	1.00						
12.	Age	41.82	13.08	0.04	0.04	0.09	-0.22	0.04	0.01	0.01	-0.02	0.03	-0.01	-0.02	1.00					
13.	Gender	0.43	0.50	0.10	0.09	0.02	0.01	0.10	0.04	0.10	0.01	0.07	0.06	0.07	0.08	1.00				
14.	Area	0.55	0.50	-0.01	0.03	-0.02	0.05	-0.42	0.12	-0.07	-0.20	-0.37	-0.34	-0.28	0.03	-0.16	1.00			
15.	Storefront	0.37	0.48	0.15	0.12	0.07	0.10	0.28	-0.16	0.18	0.15	0.21	0.18	0.19	0.06	0.27	-0.22	1.00		
16.	Employees	0.28	0.45	0.17	0.15	0.13	0.06	0.32	-0.07	0.14	0.01	0.07	0.01	0.04	0.06	0.19	-0.04	0.34	1.00	
17.	Oversight	1.35	1.15	0.02	-0.08	-0.13	0.02	0.23	-0.10	-0.02	0.69	0.63	0.68	0.62	-0.01	0.02	-0.13	0.10	-0.02	1.00

* Industry dummies included in analysis but not presented

TABLE 4.3: Logistic Regression Results

	Full Model							
	Model 1			Model 2		Model 3		
	B	(S.E.)	Odds Ratio	B	(S.E.)	B	(S.E.)	Corresponding Hypotheses
Independent Variables								
Opportunity Driven	1.89***	(0.39)	6.58	1.88***	(0.40)	1.88***	(0.40)	H1
Improvement Driven	0.40	(0.34)	1.49	0.39	(0.34)	0.39	(0.34)	H1
Education	0.32***	(0.09)	1.37	0.31***	(0.09)	0.32***	(0.09)	H2
Family	0.44	(0.33)	1.55	0.44	(0.33)	0.44	(0.33)	H3
Crossing Boundaries								
Clients	0.85***	(0.20)	2.33	0.85**	(0.29)	0.85***	(0.20)	H4a
Suppliers	0.59**	(0.19)	1.80	0.59**	(0.19)	0.55†	(0.29)	H4b
Institutional Voids								
Finance	-0.35†	(0.19)	0.70	-0.34	(0.32)	-0.41	(0.45)	H5
Interaction Effects								
Clients X Finance	#	#		-0.01	(0.16)	#	#	H6
Suppliers X Finance	#	#		#	#	0.02	(0.16)	H6
Control Variables								
Age	0.02*	(0.01)		0.02*	(0.01)	0.02*	(0.01)	
Gender	-0.20	(0.33)		-0.16	(0.33)	-0.16	(0.33)	
Area	0.04	(0.30)		0.05	(0.31)	0.04	(0.31)	
Storefront	0.93**	(0.36)		0.93**	(0.36)	0.93**	(0.36)	
Employees	0.53	(0.33)		0.53	(0.33)	0.53	(0.33)	
Oversight	0.36*	(0.17)		0.36*	(0.17)	0.36*	(0.17)	
Industry								
Taxi & Delivery	2.76*	(1.28)		2.77*	(1.30)	2.74*	(1.28)	
Bar / Restaurant	1.20	(1.13)		1.20	(1.13)	1.21	(1.13)	
Beauty Salon	-0.51	(0.73)		-0.51	(0.73)	-0.51	(0.73)	
Confectioner	0.46	(1.46)		0.46	(1.46)	0.46	(1.46)	
Contractor	0.91	(1.29)		0.91	(1.29)	0.91	(1.29)	
Domestic Services	0.93	(1.48)		0.94	(1.48)	0.93	(1.48)	
Education & Classes	1.77	(1.20)		1.77	(1.20)	1.77	(1.21)	
General Retail	2.50*	(1.12)		2.50*	(1.12)	2.50*	(1.12)	
General Services	1.89†	(1.10)		1.89†	(1.11)	1.89†	(1.11)	
Variety Store	1.02	(1.28)		1.03	(1.29)	1.03	(1.28)	
Groceries / Food	2.67*	(1.09)		2.67*	(1.09)	2.67*	(1.09)	
Handicrafts	0.41	(1.48)		0.42	(1.49)	0.41	(1.48)	
Professional Services	-0.55	(1.82)		-0.56	(1.83)	-0.55	(1.83)	
_cons	-11.01	(1.43)		-11.03	(1.50)	-10.93	(1.53)	
Model Significance								
McFadden's R2	0.37			0.37		0.37		
N=	2009			2009		2009		

Legend: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, # not included

CHAPTER 5:

DISCUSSION AND CONCLUSION

The objective of this dissertation was to advance current understanding of entrepreneurship in the informal economy. Central to research on the informal economy and poverty reduction is the question of what factors influence the transition or exit out of the informal economy. To date, research has focused on macro-level determinates (e.g., the quality of institutions) to explain and predict activity in the informal economy (e.g., Dau & Cuervo-Cazurra, 2014; De Soto, 1989, 2000; La Porta & Schleifer, 2008; Thai & Turkina, 2014). A fundamental assumption or argument in the extant research suggests that the solution to the informal economy and poverty resides in institutional reform that transforms or strengthens weak institutions into well-functioning and inclusive institutions. However, scholars have begun to recognize that "the easily invoked (but fundamentally incorrect) notion of weak institutions provides an overly simplistic solution to a complex problem" (Godfrey, 2011: 266; Mair, Marti, & Ventresca, 2012). This dissertation maintains that a more micro perspective that focuses on the individual attributes and strategies of entrepreneurs can help explain and predict informal activity and the entrepreneur's exit out of the informal economy (Barney & Felin, 2013, De Castro *et al*., 2014; Skousen & Mahoney, 2015; Webb & Ireland, 2015).

In each dissertation chapter I propose important directions for future research and discuss theoretical implications. I begin in chapter 1 by building a framework to distinguish between formal and informal institutional environments and highlight that the informal economy can occur in both institutional environments. This framework is illustrated in figure 1.1. In chapter 2, I highlight how entrepreneurship in informal institutional environments (represented by quadrants 1 and 2) may be different than in more developed contexts. To date, entrepreneurship theory is largely based on entrepreneurship in formal institutional environments. Thus, chapter 2 is exploratory in nature and seeks to gain an understanding of entrepreneurship in informal institutional environments and to identify important differences that may inform current management theory. I discuss how my empirical findings relate to current theory in a variety of different literatures (e.g., informal economy, institutions and entrepreneurship and entrepreneurship). Notably, entrepreneurs in informal institutional environments appear to exhibit fundamental differences in human capital (e.g., education, employment experience, industry experience, start-up experience) and entrepreneurial motivation relative to entrepreneurs in more developed contexts. Such differences have implications for research/theory on opportunity identification and exploitation (e.g., growth, persistence) (DeTienee, Shepherd, & De Castro, 2008; Holland & Shepherd, 2013; Shane, 2000). Future research would benefit from examining these differences which could provide important boundary conditions on our current theories and our understanding of the relationships between human capital and entrepreneurial motivation with entrepreneurial outcomes.

In Chapter 3, I turn the focus to the first research question (figure 1.2) which examines the micro-level antecedents that influence whether an entrepreneur will cross institutional boundaries. I frame this research question within the broader literature on institutions and entrepreneurship (Sine and David, 2010) and management research on the informal economy (Godfrey, 2011; 2015; Webb and Ireland, 2015; Webb et al., 2009). The interaction between formal and informal institutions is foundational to informal economy research (Webb *et al*., 2009a) and research on institutions and entrepreneurship (Eberhart, Eesley, Cheng, & Skousen, 2015; Hiatt, Sine, & Tolbert, 2009; Peredo & McLean, 2013). Yet, while this literature recognizes that informal and formal institutions may not always be congruent it does little to explain which entrepreneurs are more likely to interact with incongruent institutions by crossing institutional boundaries. This dissertation contributes to these streams of research by examining the antecedents to crossing institutional boundaries and by distinguishing between crossing institutional boundaries for clients and suppliers. Findings suggest that crossing institutional boundaries for suppliers has a stronger statistical relationship with the independent variables. These findings suggest that greater friction between both formal and informal institutions occurs in supplier relationships relative to client relationships (Skousen & Mahoney, 2015).

This dissertation also contributes to recent research on the institutional boundaries of the informal economy (Webb & Ireland, 2015) by illustrating the fluidity of institutional boundaries. This dissertation illustrates that the boundary between informal and formal institutional environments can vary significantly based on the context. For example, in the case of Rocinha, the boundaries are stark whereas in Manguinhos the boundaries are more gradual. This reality creates avenues for future research to examine with greater theoretical emphasis placed on institutional boundaries and the friction between competing institutions. This is represented by the area marked as ‘institutional boundaries’ in figures 1.2 and 1.3. This distinction is important because empirical results in chapter 3 suggest that family businesses are more likely to be active in these areas labeled ‘institutional boundaries’ but are not likely to cross beyond. As such, the interaction between formal and informal institutions across different points of the institutional boundaries may have different outcomes and require different strategies to overcome potential friction between competing institutions. Therefore, future research would benefit from more work that considers, both theoretically and empirically, the institutional boundaries between formal and informal institutional environments. A summary of the findings for Chapters 3 are listed in Table 5.1.

In Chapter 4, I seek to explain entrepreneurship in quadrant 2 of figure 1.1. Current macro-level theorizing on the informal economy does not adequately explain why entrepreneurs operating in an informal institutional environment would be participating in the formal economy. I suggest that examining more micro-level attributes of entrepreneurs and their firm strategies can explain and predict this phenomenon. Chapter 4 results suggest that entrepreneurial motivation is associated with the likelihood of registration. Based on my review, studies have not examined the relationship (either theoretically or empirically) of how entrepreneurial motivation influences the likelihood of registration. Similarly, it has not examined its relationship with crossing institutional boundaries (chapter 3). In chapter 4 results suggest that opportunity-driven entrepreneurship is associated with the likelihood of registration. Interestingly, a similar relationship was not found for improvement-driven entrepreneurs, a subset of opportunity-driven entrepreneurs. These findings suggest that opportunity-driven entrepreneurs seek the gains associated with formality while improvement-driven entrepreneurs seek other forms of benefits (i.e., independence/autonomy) not as strongly tied to benefits associated with formality (e.g., growth, legitimacy, etc.) (See Table 4.1). In my discussion below on mechanisms and limitations I discuss these findings in greater detail. However, future research would benefit greatly from teasing out legitimacy vs. efficiency concerns associated with the decision to exit the informal economy and when one concern dominates the other.

Turning to the other variables of interest I find that education and crossing institutional boundaries for clients and suppliers is positively associated with the likelihood of registration. These findings corroborate the argument for more micro-level research on the informal economy that considers the entrepreneurs attributes and strategies. In an effort to examine whether the entrepreneur's difficulty with institutional voids moderates the entrepreneur's strategic behavior I empirically test whether such difficulty moderates the relationship between crossing institutional boundaries and the likelihood of registration. I find no empirical support for such a relationship. However, my findings do inform research on institutional voids. Interestingly, only finance and labor voids were negatively associated with the likelihood of registration. These findings suggest that the biggest barriers to participating in the formal economy are access to financing and how to resolve labor issues (e.g., contracting, training, etc.) which inhibit growth as the company tries to transition out of the informal economy. Research on institutional voids has long identified access to finance as a key factor in influencing informal economic activity (De Soto, 2000; Mair & Marti, 2009). However, labor voids have not been well studied in the informal economy literature. Future research would benefit from examining how entrepreneurs transition from informal contracting to formal contracting. The data in this dissertation indicate that many entrepreneurs have employees. As unregistered entrepreneurs transition into the formal economy how do they manage undocumented workers or how do they transition their employees into the formal economy? What aspects of governance should remain intact or evolve as the firm transitions into the formal economy (Godfrey, 2011)? These are important questions that to date have not been adequately addressed and merit further examination. A summary of research findings from Chapter 4 are summarized in Table 5.2.

Mechanisms

While my dissertation built upon a large theoretical literature and previous empirical findings in developing the hypotheses, I did not directly observe the underlying mechanisms between some of the proposed relationships. In particular, it would be helpful to identify what specific social norms and values (informal institutions) influence crossing institutional boundaries and how they differ between interacting with clients compared to with suppliers. In this section I discuss the limitations of each independent variable under consideration and propose future research avenues. Table 5.3 provides a summary of the mechanisms that I am studying in this dissertation and how they are measured.

Entrepreneurial Motivation: My dissertation builds on literature that posits that human motivation influences action. There is well established literature that entrepreneurial motivation is a mechanism that influences the strategic behavior of entrepreneurs (Shane *et al*., 2003). In this dissertation I use a direct response from the entrepreneur on what he or she states was the primary reason for starting his/her business. I use the entrepreneur's response to create three groups of motivation based on the literature (opportunity-driven, improvement-driven (a subset of opportunity-driven), and necessity-driven entrepreneurship). Each of these forms of motivation have been shown to influence how an entrepreneur navigates the entrepreneurship process (Stephan *et al*., 2015). In this dissertation I use the entrepreneur's motivation as a direct mechanism to build theory to suggest that an entrepreneur's motivation will influence whether or not he/she crosses institutional boundaries and is more likely to register his/her firm. The primary limitation of this measure is that the survey instrument only identifies the primary motivation for starting the business. It is plausible that entrepreneurs have several motivations for starting a business. Provided the diversity of entrepreneurial motivation, future research would benefit from identifying the conditions under which different types (and combinations) of entrepreneurial motivations link to entrepreneurial outcomes. Based on the empirical findings it appears that improvement-driven entrepreneurs are willing to interact with incongruent institutions (cross institutional boundaries) yet they tend to not be associated with registering their businesses. This suggests that they may be willing to make an attempt to grow their business beyond subsistence levels but that growth ambitions may taper off as they don't seek to formalize their business. This suggests that improvement-driven motivation may have an inverted-U shape relationship with growth ambitions. On the other hand opportunity-driven entrepreneurs tend to be associated with higher growth ambitions. These differences highlight the importance for future research to better understand the individual and contextual factors behind growth motivations and other entrepreneurial outcomes associated with the entrepreneur's motivation for starting a business. Lastly, research on entrepreneurial motivation indicates that motivations can change over time. An important area for future research would be to consider how motivations in impoverished setting evolve over time and how that influences the entrepreneurship process and the entrepreneur's transition out of the informal economy.

Education: In this dissertation I use education as a proxy for the entrepreneur's level of human capital; which is a common proxy for human capital in the literature. Additionally, education has been empirically tied to an individual's actions being more efficient and effective. Thus I build on this work to suggest that the level of the entrepreneur's human capital (measured as level of education) influences the likelihood that he/she will cross institutional boundaries and and register his/her business.

Family: In this dissertation the variable *family* represents a distinct ownership type that is common in informal institutional environments. I create a dichotomous measure of whether or not the entrepreneur considers the business a family business based on his/her response to the question, "do you consider your business a family business, mixed, or non-family business." I argue that future research would benefit from developing a more systematic way to identify family businesses in informal institutional environments. The challenge arises that in less developed contexts there are no legal ownership agreements, which is a common way to identify family businesses in more developed institutional contexts. The precise mechanisms that I am theorizing about in this variable are not observable. What I do is build theory based on the family business literature that suggests that family businesses accrue specific advantages or characteristics that would make them less likely to interact with incongruent institutions and rely less on formal institutions relative to non-family businesses. These specific advantages include relational governance, higher levels of trust, access to family resources (both financial and social), and a tendency to be more embedded within their social environments. These characteristics, which I do not measure directly, represent the mechanisms I am trying to examine in this dissertation.

Crossing Institutional Boundaries: Two measures of crossing institutional boundaries are used in this dissertation. I distinguish between crossing institutional boundaries for clients and suppliers. These variables represent the friction, from both informal and formal institutions, which occurs when entrepreneurs cross institutional boundaries. I argue that it is important to distinguish between the two because there may be greater friction for entrepreneurs who cross institutional boundaries for suppliers because informal institutions will function less effectively in overcoming transactional hazards and entrepreneurs can't rely on formal institutions to correct such hazards. Consequently, interacting with the suppliers will lead to increased transaction costs and weaker bargaining positions. It is important to note that while I hypothesize the same overall 'directional' effects between my variables of interest and crossing institutional boundaries for clients and suppliers I do not suggest that they have the same effect. I specifically theorize that interacting with suppliers is more challenging than suppliers and that the underlying mechanisms for each variable are slightly different. However, a limitation of these variables is that they only serve as a proxies as I do not directly measure (unobservable) the mechanisms under consideration. Future research would benefit from identifying a direct measure for the frictions that occur when exchange takes place between actors from different institutional environments and the contextual factors associated with the transaction (e.g., repeated transactions, size and type of transaction, etc.). Such measures would add clarity to how effective or ineffective informal institutions are in compensating for formal institutions in exchange relationships.

Institutional Voids: Several measures are created to measure the difficulty that entrepreneurs have with a specific institutional void. These measures are based on a survey question that asks "what is the level of difficulty that you have" with a specific type of institutional void. Thus this measure focuses on the "level of difficulty" with a specific institutional void and is not intended to represent a direct measure of institutional voids. The level of difficulty and the presence of institutional voids can vary within the urban slums. Certain areas are more developed (have better electricity, plumbing, paved roads etc.) or are closer to economic exchange activity. I create measures for the difficulty with institutional voids for finance, labor markets, infrastructure, and general economic/market conditions. The focus of this dissertation is not on testing the relationship between the difficulty with institutional voids and the dependent variables. My intent is to examine whether or not the difficulty the entrepreneur faces with institutional voids moderates the relationship between crossing institutional boundaries and the likelihood of registration in Chapter 4.

Conclusion

In conclusion, this dissertation made numerous contributions to the extant literatures on entrepreneurship, institutions and entrepreneurship, and research on the informal economy. By extending current understanding of entrepreneurship in informal institutional environments and shifting the focus of informal economy research from a macro to a more micro perspective, this dissertation has important implications to both management research/theory and to public policymakers across a wide variety of disciplines. While the context of this dissertation may be uncommon for management research, the informal economy and informal institutional environments are prevalent around the world and merit further examination (Bruton, 2010; Godfrey 2011, 2015; McGahan, 2012, Webb *et al*., 2009a). As noted by Bruton (2010) and Williams and Nadin (2010), large data sets are rare in informal economy research. As such, this dissertation provides unprecedented insight into entrepreneurship and informal economy research and has important implications for management theory. Even though the dataset used in the dissertation is unprecedented it does have limitations. First, the data used in this study were cross-sectional. It would be useful for future research to examine how entrepreneurs and their firms evolve over time and to examine the sequence of events as the transition to formality is a process and not necessarily binary in nature. Longitudinal data which provided the sequence of events would also help to avoid potential endogeneity issues inherent in cross-sectional data. Second, as noted in my discussion of mechanisms, there are some limitations in the survey design that weaken the construct validity of some variables (i.e., entrepreneurial motivation and family business). Albeit the weaknesses in some areas, this dissertation provides several contributions to the literature and has identified important areas for future research that will not only help advance the literature but also has practical implications that can inform policymakers, academics, and practitioners that are interested in trying to improve the standard of living of the billions of individuals that live in impoverished settings throughout the world.

Table 5.1: Summary of Results from Chapter 3

Hypotheses	Results		
	Manguinhos Ordered Logit	**Manguinhos Logistic Regression**	**Rocinha Logistic Regression**
Motivation			
Hypothesis 1a: *Opportunity-driven entrepreneurs are positively associated with crossing institutional boundaries for clients*	Not Supported	Not Supported	Supported
Hypothesis 1b: *Opportunity-driven entrepreneurs are positively associated with crossing institutional boundaries for suppliers*	Not Supported	Not Supported	Supported
Hypothesis 2a: *Improvement-driven entrepreneurs are positively associated with crossing institutional boundaries for clients*	Not Supported	Not Supported	Not Supported
Hypothesis 2b: *Improvement-driven entrepreneurs are positively associated with crossing institutional boundaries for suppliers*	Supported	Supported	Supported
Education			
Hypothesis 3a: *As the entrepreneur's level of education increases, the entrepreneur is more likely to cross institutional boundaries for clients*	Not Supported	Supported	Not Supported
Hypothesis 3b: *As the entrepreneur's level of education increases, the entrepreneur is more likely to cross institutional boundaries for suppliers*	Supported	Supported	Supported
Family Business			
Hypothesis 4a: *Family businesses are negatively associated with crossing institutional boundaries for clients*	Supported	Not Supported	Not Supported
Hypothesis 4b: *Family businesses are negatively associated with crossing institutional boundaries for suppliers*	Not Supported	Not Supported	Supported

Table 5.2: Summary of Results from Chapter 4

Hypotheses	Results: Manguinhos	Results: Rocinha
Motivation		
Hypothesis 1a: *Opportunity-driven entrepreneurs are positively associated with the likelihood of registration*	Supported	Supported
Hypothesis 1b: *Improvement-driven entrepreneurs are positively associated with the likelihood of registration*	Not Supported	Not Supported
Education		
Hypothesis 2: *As the entrepreneur's level of education increases, the entrepreneur is more likely to register*	Supported	Supported
Family Business		
Hypothesis 3: *Family businesses are negatively associated with the likelihood of registration*	Not Supported	Not Supported
Crossing Institutional Boundaries		
Hypothesis 4a: *Entrepreneurs who cross from informal institutional environments to a more formal institutional environment to sell goods and services are positively associated with the likelihood of registration*	Supported	Supported
Hypothesis 4b: *Entrepreneurs who cross from informal institutional environments to a more formal institutional environment to buy goods and services are positively associated with the likelihood of registration*	Supported	Supported
Institutional Voids		
Hypothesis 5: *Institutional voids are negatively associated with the likelihood of registration*	Partial Support	Partial Support
Interaction Between Institutional Voids and Crossing Institutional Boundaries		
Hypothesis 6: *The effect of crossing institutional boundaries on the likelihood of registration will be weaker when institutional voids are higher*	Not Supported	Not Supported

Table 5.3: Summary of Mechanisms

Mechanism(s)	***Proxy Variable***	***How is it Measured***	***Limitation(s)***
Entrepreneurial Motivation	Entrepreneurial Motivation	Self-reported by the respondent based on the question, "why did you start your business?	- No secondary motivations provided - Static in nature. Does not change over time
Human Capital	Education	Self-reported level of education completed by the entrepreneur	- Captures only one dimension of human capital
Advantages that accrue to family businesses that allow for less reliance on formal institutions: - Relational governance - Higher levels of trust - Access to family resources (financial, social, etc.) - Tendency to be more embedded within their social environments	Family Business	Self-reported by the respondent on whether the business is considered to be a family business, mixed, or non-family business	- Self-reported measure - No systematic way to distinguish between firms (e.g., legal ownership agreements)
Friction between incongruent institutions when crossing institutional boundaries	Clients	Self-reported location of the entrepreneur's clients	- Not a direct measure of the mechanisms
Friction between incongruent institutions when crossing institutional boundaries for suppliers: - Ineffectiveness of informal institutions in managing transactions - Increased transactions costs - Weak bargaining positions	Suppliers	Self-reported location of the entrepreneur's suppliers	- Not a direct measure of the mechanisms
Difficulty with institutional voids	Difficulty with institutional voids	Self-reported level of difficulty that entrepreneurs has with a specific type of institutional void	- Not a direct measure of institutional voids. Rather the focus is on how much difficulty is associated with a specific void

REFERENCES

Acs, Z.J., Bardasi, E., Estrin, S., & Svejnar, J. 2011. Introduction to special issue of Small Business Economics on female entrepreneurship in developed and developing economies. ***Small Business Economics***, 37(4): 393–396.

Ahmad, A.N. 2008. The labour market consequences of human smuggling: 'Illegal' employment in London's migrant economy. ***Journal of Ethnic and Migration Studies***, 34(6): 853–874.

Aldrich, H.E., & Baker, T. 2001. Learning and legitimacy: Entrepreneurial responses to constraints on the emergence of new populations and organizations. In C.B. Schoonhoven and E. Romanelli (Eds.), ***The entrepreneurship dynamic: Origins of entrepreneurship and the evolution of industries***: 207–235. Stanford, CA: Stanford University Press.

Aldrich, H., Cliff, J., 2003. The pervasive effects of family on entrepreneurship: toward a family embeddedness perspective. ***Journal of Business Venturing***, 18(5): 573–596.

Amit, R., & Muller, E. 1995. Push and pull entrepreneurship. ***Journal of Small Business and Entrepreneurship***, 12(4): 64–80.

Anderson, J.L., Markides, C., Kupp, M., 2010. The last frontier: market creation in conflict zones, deep rural areas, and urban slums. ***California Management. Review***, 52(4): 6–28.

Astrachan, J.H. 2010. Strategy in family business: Toward a multidimensional research agenda. ***Journal of Family Business Strategy***, 1(1): 6–14.

Baker, T., Nelson, R.E., 2005. Creating something from nothing: resource construction through entrepreneurial bricolage. ***Administrative Science Quarterly***, 50(3): 329–366.

Barney, J., & Felin, T. 2013. What are microfoundations? ***Academy of Management Perspectives***, 27(2): 138-155.

Baughn, C.C., Chua, B.L., & Neupert, K.E. 2006. The normative context for women's participation in entrepreneurship: A Multicountry study. ***Entrepreneurship Theory and Practice***, 30(5): 687–708.

Baum, R., Locke, E., & Smith, K. 2001. A multi-dimensional model of venture growth. ***Academy of Management Journal***, 44(2): 292–303.

Becker, G. 1962. Investment in human capital: A theoretical analysis. ***Journal of Political Economy***, 70(2): 9–49.

Becker, G. 1964. ***Human capital***. New York: Columbia University Press.

Besley, T., & Burgess, R. 2004. Can labor regulation hinder economic performance? Evidence from India. ***Quarterly Journal of Economics***, 119(1): 91–134.

Bhola, R., Verheul I., Thurik, R., & Grilo, I. 2006. ***Explaining engagement levels of opportunity and necessity entrepreneurs***. EIM Business Policy & Research.

Biles, J. 2009. Informal work in Latin America: Competing perspectives and recent debates. ***Geography Compass***, 3(1): 214–236.

Block, J., & Sandner P. 2009. Necessity and opportunity entrepreneurs and their duration in self-employment: Evidence from German micro data. ***Journal of Industry, Competition and Trade***, 9(2): 117–137.

Bosma, N., Wennekers, S., & Amoros, J.E., 2011. *Entrepreneurs and Entrepreneurial Employees Across the Globe 2011 Extended Report: Entrepreneurs and Entrepreneurial Employees*. GEM: Babson College, Babson Park, MA.

Bruin, A. de, Brush, C.G. and F. Welter. 2006. Introduction to the special issue: Towards building cumulative knowledge on women's entrepreneurship. ***Entrepreneurship Theory and Practice***, 30(5): 585–593.

Bruton, G.D. 2010. Business and the world’s poorest billion – The need for an expanded examination by management scholars. ***Academy of Management Perspectives***, 24(3): 6–10.

Bruton, G.D., Ireland, R.D., & Ketchen, D.J. 2012. Toward a research agenda on the informal economy. ***Academy of Management Perspectives***, 26(3): 1–11.

Bruton, G.D., Ketchen, D.J, & Ireland, R.D. 2013. Entrepreneurship as a solution to poverty. ***Journal of Business Venturing***, 28(6): 683–689.

Bruton, G.D., Khavul, S., & Chavez, H. 2011. Microlending in emerging economies: Building a new line of inquiry from the ground up. ***Journal of International Business Studies***, 42(5): 718-739.

Carland, J.W., Hoy, F., & Carland, J.C. 1988. Who is an entrepreneur? Is a question worth asking. ***American Journal of Small Business***, 12(4): 33–39.

Castells, M. & Portes, A. 1989. World underneath: The origins, dynamics and effects of the informal economy. In A. Portes, M. Castells, and L.A. Benton (Eds.), ***The informal economy: Studies in advanced and less developing countries*** (pp. 11-37). Baltimore: John Hopkins University Press.

Chakrabarty, S., & Bass, A.E. 2013. Encouraging entrepreneurship: Microfinance, knowledge support, and the costs of operating in institutional voids. ***Thunderbird International Business Review***, 55(5): 545–562.

Chandler, G.N., & Hanks, S. 1994. Founder competence, the environment, and venture performance. ***Entrepreneurship Theory and Practice***, 18(3): 77–90.

Chen, M.A. 2007. ***Rethinking the informal economy: Linkages with the formal economy and the formal regulatory environment***. DESA Working Paper No. 46.

Cooper, A.C., Gimeno, J., & Woo, C. 1994. Initial human and financial capital as predictors of new venture performance. ***Journal of Business Venturing***, 9(5): 371–395.

Daily, C.M., & Dollinger, M.J. 1991. Family firms are different. ***Review of Business***, 13(1): 3–5.

Dau, L.A., & Cuervo-Cazurra, A. 2014. To formalize or not to formalize: Entrepreneurship and pro-market institutions. ***Journal of Business Venturing***, 29(5): 668–686.

Davidsson, P., & Honig, B. 2003. The role of social and human capital among nascent entrepreneurs. ***Journal of Business Venturing***, 18(3): 301–331.

Davis, M. 2006. ***Planet of slums***. London, UK: Verso.

De Castro, J.O., Khavul, S., & Bruton, G.D. 2014. Shades of grey: How do informal firms navigate between macro and meso institutional environments? ***Strategic Entrepreneurship Journal***, 8(1): 75–94.

De Mel, S., McKenzie, D., & Woodruff, C. 2013. The demand for, and consequences of, formalization among informal firms in Sri Lanka. ***American Economic Journal: Applied Economics***, 5(2): 122–150.

Delmar, F., & Shane, S. 2006. Does experience matter? The effect of founding team experience on the survival and sales of newly founded ventures. ***Strategic Organization***, 4(3): 215–247.

Dertouzos, M.L., Lester, R.K., & Solow, R.M. 1989. ***Made in America: Regaining the productive edge***. Cambridge, UK: MIT Press.

De Soto, H. 1989. ***The other path: The invisible revolution in the third world***. New York: Harper and Row.

De Soto, H. 2000. ***The mystery of capital***. New York: Basic Books.

DeTienne, D.R., Shepherd, D.A., & De Castro, J.O. 2008. The fallacy of "only the strong survive": The effects of extrinsic motivation on the persistence decisions for under-performing firms. ***Journal of Business Venturing***, 23(5): 528–546.

DiMaggio, P.J., & Powell, W.W. 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. ***American Sociological Review***, 48(2): 147–160.

Dyer, W.G., & Mortenson, S.P. 2005. Entrepreneurship and family business in a hostile environment: The case of Lithuania. ***Family Business Review***, 18(3): 247-258.

Eberhart, R., Eesley, C., Cheng, J.L.C., & Skousen, B. 2015. Institutions and types of entrepreneurship: The interactive influence of regulatory and non-regulatory institutions. Available at SSRN: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2608793

Eberhart, R., Eesley, C., & Eisenhardt, K. M. 2015. Compensating conformity: Resolving the tension between economic incentives and organizational legitimacy. Available at SSRN: http://ssrn.com/abstract=2466858 or http://dx.doi.org/10.2139/ssrn.2466858.

Eesley, C. E., Hsu, D. H., & Roberts, E. B. 2014. The contingent effects of top management teams on venture performance: Aligning founding team composition with innovation strategy and commercialization environment. ***Strategic Management Journal***, 35(12):1798–1817.

EGP-Rio. 2010. Censo favelas. http://www.egprio.rj.gov.br/Conteudo.asp?ident=28

Evans, D.S., & Leighton, L.S. 1989. Some empirical aspects of entrepreneurship. ***American Economic Review***, 79(3): 519–535.

Fairbourne, J.S., Gibson, S.W., & Dyer, W.G. 2007. ***Microfranchising: Creating wealth at the bottom of the pyramid***. Northampton, MA: Edward Elgard.

Fernandez-Kelly, M.P., & Garcia, A.M. 2001. Informalization at the core: Hispanic women, homework, and the advanced capitalist state. In A. Portes, M. Castells, L.A. Benton (Eds.), ***The informal economy: Studies in advanced and less developed countries***. 247–264. The Johns Hopkins University Press, Baltimore, MD.

Fisher, G., 2012. Effectuation, causation, and bricolage: A behavioral comparison of emerging theories in entrepreneurship research. ***Entrepreneurship Theory and Practice***, 36(5): 1019–1051.

Fisher, G., Kotha, S., & Lahiri, A. *Forthcoming*. Changing with the times: An integrated view of identity, legitimacy and new venture life cycles. ***Academy of Management Review***.

Friedland, R., & Alford, R. R. 1991. Bringing society back in: Symbols, practices and institutional contradictions. In W. W. Powell, & P. DiMaggio (Eds.), ***The new institutionalism in organizational analysis***: 232-263. Chicago: University of Chicago Press.

Geertz, C. 1963. ***Peddlers and princes***. Chicago: University of Chicago Press.

Gimeno, J., Folta, T.B., Cooper, A.C., & Woo, C.Y. 1997. Survival of the fittest? Entrepreneurial human capital and the persistence of underperforming firms. ***Administrative Science Quarterly***, 42(4): 750–783.

Ginther, J., & McGahan, A.M. 2015. Healthcare in the informal economy. In P. Godfrey (Eds.), ***Management, society, and the informal economy***: 115–126. New York: Taylor and Francis.

Godfrey, P. 2011. Toward a theory of the informal economy. ***Academy of Management Annals***, 5(1): 231–277.

Godfrey, P. 2015. Why the informal economy matters to management. In P. Godfrey (Eds.), ***Management, society, and the informal economy***: 1–18. New York: Taylor and Francis.

Godfrey, P., & Dyer, G. 2015. Subsistence entrepreneurs and formal institutions: Semi-formal governance among Ghanaian entrepreneurs. In P. Godfrey (Eds.), ***Management, society, and the informal economy***: 142–160. New York: Taylor and Francis.

Godfrey, P., & Jensen, R.J. 2015. Comparative economic organization revisited. In P. Godfrey (Eds.), ***Management, society, and the informal economy***: 77–94. New York: Taylor and Francis.

Gras, D., & Nason, R.S. 2015. Bric by bric: The role of the family household in sustaining a venture in impoverished Indian Slums. ***Journal of Business Venturing***, 30(4): 546-563.

Habbershon, T.G., & Williams, M.L. 1999. A resource-based framework for assessing the strategic advantages of family firms. ***Family Business Review***, 12(1): 1–26.

Hakim, C. 1989. New recruits to self-employment in the 1980s. Employment Gazette, June: 286–297.

Hall, J., Matos, S., Sheehan, L. & Silvestre, B. 2012. Entrepreneurship and innovation at the base of the pyramid: a recipe for inclusive growth or social exclusion? ***Journal of Management Studies***, 49(4): 785–812.

Hart, K. 1973. Informal income opportunities and urban employment in Ghana. ***Journal of Modern African Studies***, 11(1): 61–89.

Helmke, G., & Levitsky, S. 2003. Informal institutions and comparative politics: A research agenda. ***Perspective on Politics***, 2(4): 725–740.

Hessels, J., van Gelderen, M., & Thurik, R. 2008. Entrepreneurial aspirations, motivations, and their drivers. ***Small Business Economics***, 31(3): 323–339.

Hiatt, S.R., Sine, W.D., & Tolbert, P.S. 2009. From Pabst to Pepsi: The deinstitutionalization of social practices and the creation of entrepreneurial opportunities. ***Administrative Science Quarterly***, 54(4): 635–667.

Holland, D.V. & Shepherd, D.A. 2013. Deciding to persist: Adversity, values, and entrepreneurs' decision policies. ***Entrepreneurship Theory and Practice***, 37(2): 331–358.

Holmén, M., Min, T.T. & Saarelainen, E. 2011. Female entrepreneurship in Afghanistan. ***Journal of Developmental Entrepreneurship***, 16(3): 307–331.

Hulme, D., & Shepherd, A. 2003. Conceptualizing chronic poverty. ***World Development***, 31(3): 403–423.

International Labour Office, 2002. International Labour Office: ***Decent work and the informal economy: Sixth item on the agenda (90th Session)***. International Labour Office, Geneva, Switzerland (2002)

Jansson, T. and Chalmers G. 2001. ***The case for business registration reform in Latin America***. Inter-American Development Bank. Washington, D.C.

Jennings, J.E., & Brush, C.G. 2013. Research on women entrepreneurs: ***Academy of Management Annals***, 7(1): 661–713.

Ketchen, D.J., Ireland, R.D., & Webb, J.W. 2014. Toward a research agenda for the informal economy: A survey of the strategic entrepreneurship journal's editorial board. ***Strategic Entrepreneurship Journal***, 8(1): 95–100.

Khanna, T., & Palepu, K. 1997. Why focused strategies may be wrong for emerging markets. ***Harvard Business Review***, 75(4): 41–51.

Khavul, S., Bruton, G.D., & Wood, E. 2009. Informal family business in Africa. ***Entrepreneurship Theory and Practice***, 33(6): 1219–1238.

Khavul, S., Chavez, H., & Bruton, G.D. 2013. When institutional change outruns the change agent: The contested terrain of entrepreneurial microfinance for those in poverty. ***Journal of Business Venturing***, 28(1): 30–50.

Kimura, Y. 2011. Knowledge diffusion and modernization of rural industrial clusters: A paper-manufacturing village in northern Vietnam. ***World Development***, 39(12): 2105–2118.

Kintgen, E. R., Kroll, B. M., & Rose, M. 1988. ***Perspectives on literacy***. Carbondale, IL: Southern Illinois University Press.

Kirkwood, J. 2009. Motivational factors in a push-pull theory of entrepreneurship. ***Gender in Management: An International Journal***, 24(5): 346–364.

Kirzner, I. 1973. ***Competition & entrepreneurship***. Chicago: University of Chicago Press.

Kistruck, G.M., Beamish, P.W., Qureshi, I., & Sutter, C.J. 2013. Social intermediation in base-of-the-pyramid markets. ***Journal of Management Studies***, 50(1): 31–66.

Kistruck, G.M., Webb, J.W., Sutter, C.J., & Ireland, R.D., 2011. Microfranchising in base-of-the-pyramid markets: Institutional challenges and adaptations to the franchise model. ***Entrepreneurship Theory and Practice***, 35(3): 503–531.

Kotey, B. 2005. Goals, management practices, and performance of family SMEs. ***International Journal of Entrepreneurial Behaviour & Research***, 11(1): 3–24.

Kraatz, M.S., & Block, E.S. 2008. ***Organizational implications of institutional pluralism***. The Sage Handbook of Organizational Institutionalism: 243–275. Thousand Oaks, CA: Sage.

Lam, L.M., & Paul, S. 2013. Displacement and erosion of informal risk-sharing: Evidence from Nepal. ***World Development***, 43: 42–55.

La Porta, R., & Schleifer, A. 2008. ***The unofficial economy and economic development***, Working Paper Series (pp. 1–75). Washington, DC: National Bureau of Economic Research.

Le Breton-Miller, I., & Miller., D. 2006. Why do some family businesses out-compete? Governance, long-term orientations, and sustainable capability. ***Entrepreneurship: Theory & Practice***, 30(6): 731–746.

Lewis, W.A. 1954/1958. Economic development with unlimited supplies of labor. In A.N. Agarwala & S.P. Singh (Eds.), ***The economics of underdevelopment***: 401–449. London: Oxford University Press.

London, T., Esper, H., Grogan-Kaylor, A., & Kistruck, G. M. 2014. Connecting poverty to purchase in informal markets. ***Strategic Entrepreneurship Journal***, 8(1): 37–55.

London T., & Hart, S.L. 2011. ***Next generation business strategies for the base of the pyramid***. Upper Saddle River, NJ: FT Press.

Lyon, F. 2000. Trust, networks and norms: The creation of social capital in agricultural economies in Ghana. ***World Development***, 28(4): 663–681.

Mair, J., & Marti, I. 2009. Entrepreneurship in and around institutional voids: A case study from Bangladesh. ***Journal of Business Venturing***, 24(5): 419–435.

Mair, J., Martí, I., & Ventresca, M. J. 2012. Building inclusive markets in rural Bangladesh: How intermediaries work institutional voids. ***Academy of Management Journal***, 55(4): 819–850.

Maloney, W.F. 1999. Does informality imply segmentation in urban labor markets? Evidence from sectoral transitions in Mexico. ***The World Bank Economic Review***, 13(2): 275–302.

Marcouiller, D., & Young, L. 1995. The black hole of graft: The predatory state and the informal economy. ***American Economic Review***, 85 (3): 630-646.

McGahan, A. 2012. Challenges of the informal economy for the field of management. ***Academy of Management Perspectives***, 26(3): 12–21.

McMullen, J.S., 2011. Delineating the domain of development entrepreneurship: A market-based approach to facilitating inclusive economic growth. ***Entrepreneurship Theory and Practice*** 35(1): 185–215.

McPherson, M.A., & Liedholm, C. 1996. Determinants of small and micro enterprise registration: Results from surveys in Niger and Swaziland. **World Development**, 24(3): 481–487.

Miller, D. & Le Breton-Miller, I. 2006. Family governance and firm performance: Agency, stewardship, and capabilities. ***Family Business Review***, 19(1): 73–87.

Minniti, M., Arenius, P., & Langowitz, N. 2005. ***Global entrepreneurship monitor 2004 report on women and entrepreneurship***. Babson College: The Centre for Women’s Leadership and London Business School.

Misangyi, V.F., Weaver, G.R., & Elms, H. 2008. Ending Corruption: The interplay among institutional logics, resources, and institutional entrepreneurs. ***Academy of Management Review***, 33(3): 750–770.

Moores, K. 2009. Paradigms and theory building in the domain of business families. ***Family Business Review***, 22(2): 167–180.

Morris, M.H., Miyasaki, N.N., Watters, C.E., & Coombes, S.M. 2006. The dilemma of growth: Understanding venture size choices of women entrepreneurs. ***Journal of Small Business Management***, 44(2): 221–244.

Murphy, K.M., Shleifer, A., & Vishny, R.W. 1991. The allocation of talent: Implications for growth. ***Quarterly Journal of Economics***, 106(2): 503–530.

Naldi, L., Nordqvist, M., Sjoberg, K., & Wiklund, J. 2007. Entrepreneurial orientation, risk taking, and performance in family firms. ***Family Business Review***, 20(1): 33–47.

Nichter, S., & Goldmark, L. 2009. Small firm growth in developing countries. ***World Development***, 37(9): 1453–1464.

North, D.C. 1990. ***Institutions, institutional change and economic performance***. New York: Cambridge University Press.

Nwabuzor, A. 2005. Corruption and development: New initiatives in economic openness and strengthened rule of law. ***Journal of Business Ethics***, 59 (1): 121–138.

Nyssens, M. 2006. ***Social enterprise: At the crossroads of market, public policies and civil society***. New York. Routledge,

Odegaard, C.V. 2008. Informal trade, contraband and prosperous socialities in Arequipa, Peru. ***Ethnos***, 73(2): 241-266.

Ostrom, E. 1990. ***Governing the commons: The evolution of institutions for collective action***. Cambridge, MA: Cambridge University Press.

Pache, A.C., & Santos, F. 2010. When worlds collide: The internal dynamics of organizational responses to conflicting institutional demands. ***Academy of Management Review***, 35(3): 455–476.

Pearce, J. 2005. Organizational scholarship and the eradication of global poverty. ***Academy of Management Journal***, 48(6): 570–572.

Peng, M.H., & Heath, P.S. 1996. The growth of the firm in planned economies in transition: Institutions, organizations, and strategic choice. ***Academy of Management Review***, 21(2): 492–528.

Penrose, E.T. 1959. ***The theory of the growth of the firm***, 1959. New York: John Wiley & Sons.

Peredo, A.M., & Chrisman, J.J. 2006. Toward a theory of community-based enterprise. ***Academy of Management Review***, 31(2): 309–328.

Peredo, A.M., & McLean, M. 2013. Indigenous development and the cultural captivity of entrepreneurship. **Business & Society**, 52(4): 592–620.

Perry, G.E. & Maloney, W.F. 2007. Overview: Informality — exit and exclusion. In G.E. Perry, W.F., Maloney, O.S. Arias, P. Fajnzylber, A.D. Mason, and J. Saavedra-Chanduvi (Eds.), ***Informality: Exit and Conclusion***. Washington DC: World Bank.

Pfeffer, J., & Salancik, G.R. 2003. ***The external control of organizations: A Resource dependence perspective***. Stanford, CA: Stanford University Press.

Polanyi, K. 1957. The economy as instituted process. In K. Polanyi, C.M. Arensberg, and H.W. Pearson (Eds.), ***Trade and market in the early empires***: 243–270. Chicago: Henry Regnery Company.

Portes, A., & Sensenbrenner, J. 1993. Embeddedness and immigration: Notes on the social determinants of economic action. ***American Journal of Sociology***, 98(6): 1320–1350.

Prahalad, C.K. 2005. ***The fortune at the bottom of the pyramid***. Philadelphia, PA: Wharton School.

Prahalad, C.K., & Hart, S.L. 2002. The fortune at the bottom of the pyramid. ***Strategy + Business***, 26: 1–14.

Reynolds, P.D., Camp, S.M., Bygrave, W.D., Autio, E., & Hay, M. 2001. ***Global entrepreneurship monitor executive report.***

Reynolds, P.D., & Curtin, R. 2008. Business creation in the United States: Panel study of entrepreneurial dynamics II initial assessment. ***Foundations and Trends in Entrepreneurship***, 4(3): 155–307.

Rivera-Santos, M. & Rufin, C. 2010. Global village vs. small town: Understanding networks at the base of the pyramid. ***International Business Review***, 19(2): 126–139.

Roberts, B. 1994. Informal economy and family strategies. ***International Journal of Urban and Regional Research***, 18(1): 6–23.

Rosa, J.A., & Viswanathan M. 2007. ***Product and market development for subsistence marketplaces***. Oxford, UK: Elsevier.

Sathe, V., & Jager, U. 2015. An individual's unique identity as a missing link in research on the informal economy: Learning from India's Aadhaar project. In P. Godfrey (Eds.), ***Management, society, and the informal economy***: 161–178. New York: Taylor and Francis.

Schjoedt, L., & Shaver, K.G. 2007. Deciding on an entrepreneurial career: A test of the pull and push hypotheses using the panel study of entrepreneurial dynamics data. ***Entrepreneurship Theory and Practice***, 31(5): 733–52.

Schneider, F. 2002. ***The shadow economy: an international survey***. New York: Cambridge University Press.

Schneider, F. 2005. Getting beyond the training vs. work experience debate: The role of labor markets, social capital, cultural capital, and community resources in long-term poverty. ***Journal of Women, Politics and Policy***, 27(3): 41–53.

Schultz, T. W. 1961. Investment in human capital. ***American Economic Review***, 51(1): 1–17.

Schulze, W.S., & Godfrey, P. 2015. Organization and contract in the informal economy. In P. Godfrey (Eds.), ***Management, society, and the informal economy***: 60–76. New York: Taylor and Francis.

Schulze, W.S., Lubatkin, M.H., Dino, R.N., & Buchholtz, A.K. 2001. Agency relationships in family firms: Theory and evidence. ***Organization Science***, 12(2): 99–116.

Schumpeter, J.A. 1976. ***Capitalism, socialism and democracy***. New York: Harper & Row.

Sclar E.D, Garau P., & Carolini G. 2005. The 21st century health challenge of slums and cities. ***The Lancet***; 365(9462): 901–903.

Scott, W.R. 2008. ***Institutions and organizations: Ideas and interests***. Thousand Oaks, CA: Sage Publications.

Scott, C. 2013. ***Anonymous agencies, backstreet businesses, and covert collectives: Rethinking organizations in the 21st Century***. Stanford, CA: Stanford University Press.

Scott, L., Dolan, C., Johnstone-Louis, M., Sugden, K, & Wu, M. 2012. Enterprise and inequality: A study of Avon in South Africa. ***Entrepreneurship Theory and Practice***, 36(3): 543–568.

Scott, C.R., & Haseki, M. 2015.Communication, visibility, and the informal economy. In P. Godfrey (Eds.), ***Management, society, and the informal economy***: 42–59. New York:Taylor and Francis.

Seelos, C., & Mair, J. 2007. Profitable business models and market creation in the context of deep poverty: A strategic view. ***Academy of Management Perspectives***, 21(4): 49–63.

Shane, S. 2000. Prior knowledge and the discovery of entrepreneurial opportunities. ***Organization Science***, 11(4): 448–469.

Shane, S., Locke, E.A., & Collins, C.C. 2003. Entrepreneurial motivation. ***Human Resource Management Review***, 13(2): 257–279.

Shapero, A., & Sokol, L. 1982. The social dimensions of entrepreneurship. In C. Kent, D. Sexton and k. Vesper (Eds.), ***Encyclopedia of entrepreneurship***: 72-90. Englewoods Cliffs, NJ: Prentice-Hall.

Shepherd, D.A., & DeTienne, D.R. 2005. Prior knowledge, potential financial reward, and opportunity identification. ***Entrepreneurship Theory and Practice***, 29(1): 91–112.

Sine, W.D., & David, R.J. 2010. Institutions and entrepreneurship, in W.D. Sine, R.J. David (ed.) ***Institutions and entrepreneurship (Research in the sociology of work, volume 21)***: Emerald Group Publishing Limited.

Singh, R.P., Hills, G.E., Hybels, R.C., & Lumpkin, G.T. 1999. Opportunity recognition through social network characteristics of entrepreneurs. In P.D. Reynolds, W.D. Bygrave, S. Manigart, C.M. Mason, G.D. Meyer, H.J. Sapienza, and K.G. Shaver (Eds.), ***Frontiers of Entrepreneurship Research***, 228–256. Wellesley, MA: Babson College.

Siqueira, A., Webb, J.W., & Bruton, G.D. *Forthcoming*. Informal entrepreneurship and industry conditions. ***Entrepreneurship Theory and Practice***.

Sirmon, D.G., & Hitt, M.A. 2003. Managing resources: linking unique resources, management, and wealth creation in family firms. ***Entrepreneurship Theory and Practice***, 27(4): 339–258.

Skousen, B.R., & Mahoney, J.T. 2015. Factors influencing the registration decision in the informal economy. In P. Godfrey (Eds.), ***Management, society, and the informal economy***: 95–111. New York: Taylor and Francis.

Stephan, U., Hart, M., & Drews, C. 2015. Understanding motivations for entrepreneurship: A review of recent evidence. Enterprise Research Centre, Birmingham, UK.

Stoner, C.R., & Fry, F.L., 1982. The entrepreneurial decision: Dissatisfaction or opportunity. Journal of *Small Business Management*, 39–44.

Suchman, M.C., Steward, D.J., & Westfall, C.A. 2001. In C.B. Schoonhoven and E. Romanelli (Eds.), ***The entrepreneurship dynamic: Origins of entrepreneurship and the evolution of industries***: 349-382. Stanford, CA: Stanford University Press.

Sudhinaraset, M., Ingram, M., Lofthouse, H.K., & Montagu, D. 2013. What is the role of informal healthcare providers in developing countries? A systematic review. ***PLoS ONE***, 8: e54978.

Sutter, C.J., Webb, J.W., Kistruck, G.M., & Bailey, A.V.G. 2013. Entrepreneurs' responses to semi-formal illegitimate institutional arrangements. ***Journal of Business Venturing***, 28(6): 743–758.

Terjesen, S., Hessels, J. & Li., D. 2013. Comparative international entrepreneurship: A review and research agenda. ***Journal of Management***, in press.

Thai, M.T.T., & Turkina, E. 2014. Macro-level determinants of formal entrepreneurship versus informal entrepreneurship. ***Journal of Business Venturing***, 29(4): 490–510.

Thomas, A.S., & Mueller S.L. 2000. A case for comparative entrepreneurship: Assessing the relevance of culture, ***Journal of International Business Studies***, 31(2): 287–301.

Thornton, P.H. 2004. ***Markets from culture: Institutional logics and organizational decisions in higher education publishing***. Stanford, CA: Stanford University Press.

Thornton, P.H., & Ocasio, W. 1999. Institutional logics and the historical contingency of power in organizations: Executive succession in the higher education publishing industry, 1958-1990. ***American Journal of Sociology***, 105(3): 801–843.

Thornton, P.H., Ocasio, W., & Lounsbury, M. 2012. ***The institutional logics perspective: A new approach to culture, structure, and process***: Oxford University Press.

Uhlaner, L.M., & Thurik, A.R. 2007. Post-materialism: a cultural factor influencing total entrepreneurial activity across nations. ***Journal of Evolutionary Economics***, 17(2):161–185.

UN-HABITAT. 2003. ***Slums of the world: The face of urban poverty in the new millennium?*** Working paper, Nairobi, Kenya.

United Nations. 2010. Millennium development goal indicators. Available at http://unstats.un.org/unsd/mdg/SeriesDetail.aspx?srid580

Unger, J.M., Rauch, A., Frese, M., & Rosenbusch, N. 2011. Human capital and entrepreneurial success: A meta-analytical review. ***Journal of Business Venturing***, 26(3): 341–358.

Uzo, U., & Mair, J. 2014. Source and patterns of organizational defiance of formal institutions: Insights from Nollywood, the Nigerian movie industry. ***Strategic Entrepreneurship Journal***, 8(1): 56–74.

Uzzi, B. 1996. The sources and consequences of embeddedness for the economic performance of organizations: The network effect. ***American Sociological Review***, 61(4): 674–689.

Venkatesh, S.A. 2006. ***Off the books: The underground economy of the urban poor***. Cambridge, MA: Harvard University Press.

Verheul, I., Thurik, R., Hessels, J., & van der Zwan, P. 2010. ***Factors influencing the entrepreneurial engagement of opportunity and necessity entrepreneurs***. EIM Research Report, March 2010.

Wallerstein, I. 1974/2007. ***World-systems analysis*** (5th ed.). Durham, NC: Duke University Press.

Webb, J.W., Bruton, G.B., Tihanyi, L., & Ireland R.D. 2013. Research on entrepreneurship in the informal economy: Framing a research agenda. ***Journal of Business Venturing***, 28(5): 598–614.

Webb, J.W., & Ireland, D. 2015. Laying the foundation for a theory of informal adjustments. In P. Godfrey (Eds.), ***Management, society, and the informal economy***: 21–41. New York: Taylor and Francis.

Webb, J. W., Ireland, D., & Ketchen, D. J. 2014. Toward a greater understanding of entrepreneurship and strategy in the informal economy. ***Strategic Entrepreneurship Journal***, 8(1): 1–15.

Webb, J.W., Kistruck, G.M., Ireland, R.D., & Ketchen, D.J. 2009b. The entrepreneurship process in base of the pyramid markets: The case of multinational enterprise/nongovernment organization alliances. ***Entrepreneurship Theory and Practice***, 28(5): 598–614.

Webb, J.W., Tihanyi, L., Ireland, R.D., & Sirmon, D.G. 2009a. You say illegal, I say legitimate: Entrepreneurship in the informal economy. ***Academy of Management Review***, 34(3): 492–510.

Williams, C. C., & Gurtoo, A. 2011. Evaluating women entrepreneurs in the informal sector: Some evidence from India. ***Journal of Developmental Entrepreneurship***, 16(3): 351–369.

Williams, C.C., & Nadin, S. 2010. Entrepreneurship and the informal economy: An overview. ***Journal of Developmental Entrepreneurship***, 15(4): 361–378.

Williamson, O. E. 1985. ***The economic institutions of capitalism: Firms, markets, relational contracting***. New York: Free Press.

Williamson, O. E. 1991. Comparative economic organization: The analysis of discrete structural alternatives. ***Administrative Science Quarterly***, 36(2): 269–296.

World Resources Institute, 2007. ***The next 4 billion: Market size and business strategy at the base of the pyramid***. World Resources Institute and International Finance Corporation, Washington, DC.

Zahra, S.A., Hayton, J.C., & Salvato, C. 2004. Entrepreneurship in family vs. non-family firms: A resource-based analysis of the effect of organizational culture. ***Entrepreneurship Theory and Practice***, 28(4): 363-381.

Zinnes, C. 2009. ***Business environment reforms and the informal economy***. In B.E.W. Group (Ed.), Cambridge, UK: Donor Committee for Enterprise Development.